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Thos. F. Rumbold, M. D.,
Editor and Proprietor.

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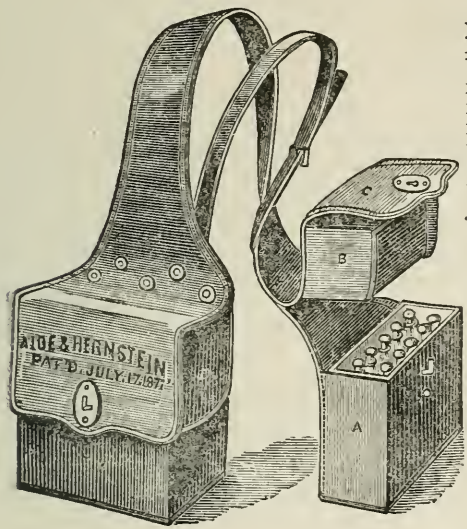

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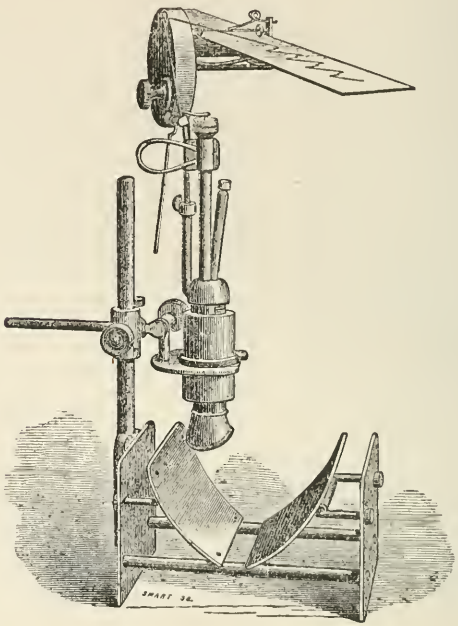

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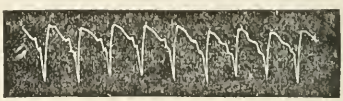

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☞The Editors hold themselves responsible for the Character of the Contributions, but not for the Opinions expressed in them.

Notice to Contributors and Correspondents.

Articles intended for publication in the next number should be forwarded one month prior to the date of publication. They must be contributed to this Journal exclusively.

Contributions of original articles are invited from all parts of the country. The publishers offer all facilities for illustration by wood cuts or lithographs of first-class workmanship, at their own expense. At their request authors will be supplied without charge with a limited number of copies containing their articles; extra copies printed separately can be furnished only at the expense of the authors. Declined communications are preserved for six months, and will be returned within that time, on application and transmission of the necessary postage.

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All communications, letters, remittances, books for review, etc., should be directed to Thos. F. Rumbold, M. D., 1225 Washington Avenue, St. Louis.

Foreign exchanges and books for review should be sent under cover to Messrs. Williams & Norgate, 14 Henrietta Street, Covent Garden, London; or to Herr B. Hermann, Leipzig; or M. Charles Reinwald, 15 Rue des Sts. Peres, Paris.

Glycerite of Animal Hypophosphites.

A BRAIN AND NERVE FOOD.

Composed of the Phosphorous principles of animal brain, blood and tissues, either normally in the Hypophosphite form, or so produced in the isolation of them.

The experience of several thousand physicians who have employed the phosphorous element of brain and wheat, is that these far excel the ordinary Hypophosphites in nutriment and tonic properties.

M. F. Anderson, Licentiate of the Royal College of Physicians of Edinburgh, has shown that Phosphates isloated from animal tissues are of positive and unequivocable value in the treatment of Phthisis. See his "Phosphates in Nutrition." London. 1878.

Dr. Charles G. Polk, in his Treatise on "Tuberculosis; Causations, Lesions and Therapeutics," shows by a large amount of evidence that Animal Hypophosphites will arrest the disease in forty per cent of cases, while the officinal Hypophosphites will arrest it in less than twenty-three per cent; the Extract of Malt in four per cent, and cod liver oil in less than three per cent.

Dr. Louis Starr, of the Episcopal Hospital, Philadelphia, has found animal hypophosphites of great value in phthisis. (*New York Medical Record*, March 1st, 1879.)

We have on our file the declarations of several hundred physicians of the immense superiority of animal hypophosphites over all other remedies in the treatment of phthisis.

But the largest number of testimonials we have received have related to the efficacy of this remedy in the various forms of nerve exhaustion. As these distressing maladies are always associated with phosphatic deficiency, this remedy, by restoring that deficiency, accomplishes a cure in the absence of organic lesions, if the excessive waste of the phosphates be arrested. Decay of the intellectual powers as expressed in loss of memory, inability to fix the attention upon one subject; vacillation of character; obstinate vigilance; loss of procreative power; abnormal timidity; vital deterioration consequent upon excessive indulgence of the sexual appetite; brain strain; prolonged depressing mental emotions, and deficient supply of food strongly indicate the employment of Glycerite of Animal Hypophosphites.

The claim of the immense superiority of animal and vegetable phosphates is sustained by some of the highest authorities in the world:

Dr. Tilbury Fox, one of England's greatest physicians and world-wide known as a dermatologist, says: "There is something essentially special in the organized phosphates that have been formed by passing through a living organism, as compared with those artificially prepared. It is not the *amount*, but the *kind* exhibited which produces the good results."

M. Andre Sanson, in a paper read at the Academy of Medicine (Gazette Medicale, August 14, 1869) said, "That to promote osseous growth, the administration of Phosphate of Lime either in the shape of Hypophosphites (laboratory kind), or in that of powdered bone is unavailing. Several attemps made with these substances have never been successful. *It was because their form does not allow of their assimilation. On the contrary organic phosphates, such as are elaborated in vegetables, are real aliments.*

Dr. Routh, of London, says: "In morbid conditions, resulting from deficient amount of phosphorus in the human system, a large experience, and an extensive field of observations has proved that it is perfectly useless to attempt their removal by phospohrous compounds, manufactured in the laboratory. The re-supply must be furnished by food, rich in these compounds, as wheat bran, egg, fish, and shell fish."

Dr. Geoge Tempini says: "Nervous exhaustion, whether manifest in the functions of the cerebrum, cerebelum, or spinal cord is always attended with a deficiency of phosphorus. This deficiency can alone be restored by phosphorus, assimilated from the food."

Dr. Samuel R. Percy, in his Essay "Phosphorus," speaking of the nitrogenous hypophosphite, which is the Hypophosphite element of this preparation, says on page 658, Transactions of the American Medical Association, 1872: "Although this Nitrogenous Hypophosphite has been isolated from brain and nerves; it has, we believe, *never yet been formed in the laboratory, nor has it been used as a therapeutical agent.*

Upon hypothetical grounds alone, we should suppose it to be one of the most assimilable of all the preparations of phosphorus, because it most nearly resembles that form of phosphorus which is found to be the most active in the animal economy."

It will be noticed that Dr. Percy merely "*supposed on hypothetical grounds alone*" what Tempini, Sanson, Fox, Routh and Polk had previously stated, and squarely admits he had not used such compounds as a therapeutical agent. Moreover his statement that he has ever published in any Essay, Paper, Circular, Book or Pamphlet a working formula for such a preparation is without the slighest shadow of a truth.

COMPOSITION OF A HUNDRED PARTS:

Isolated Nitrogenous Hypophosphite of			Calcium	8 parts
"	"	"	Sodium	6 "
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Glycero-Nitrogenous Hypophosphite				15 "
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DOSE.—Twenty drops three times a day.

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NATURE'S REMEDY.
THE SEVEN SPRINGS
Iron and Alum Mass.

In the "salts" or solids of "Mineral Water," obtained by evaporation, from the waters of a group of seven springs, in Washington county, Virginia. Notwithstanding these springs are less than 30 yards apart, no two of them possess the same medicinal properties. The mass obtained from the reduction of these waters, as analysed by Prof. J. W. Mallet, of the University of Virginia, contains *nineteen* distinct, well proportioned alkaline properties, the combination of which seem to possess unusual therapeautic virtues—as the physicians, as well as the thousands of non-professionals have learned by actual experience.

Our "pamphlet" contains full particulars, with analysis, mode of preparing, uses, application, etc., which will be mailed free to any one sending their name and P. O. address.

As may be inferred from the nature and character of this remedy, it is neither a *patent* nor *proprietary* preparation, but as there are several other preparations of similar character now being manufactured in Virginia, we would advise all who order, to mention the "Seven Springs Iron and Alum Mass," prepared by Landrum & Litchfield.

The following extracts of letters from eminent physicians, who have used this Mass, will serve to show the estimation placed upon it as a therapeutic remedy. We could produce many hundreds if it were necessary and had sufficient space:

"I have found no one single remedy to yield such satisfactory results in the treatment of *Chronic Gastric Catarrh*, as the "Iron and Alum Mass." In *Chronic Diarrhœa*, in *Anæmia, Chlorosis*, and for *Chronic Eczema*, I deem it invaluable, associated with appropriate topical treatment. GEO. T. HARRISON, M. D., 221 W. 23rd St., N. Y

"In an interesting case of *Menorrhagia*, accompanied with symptoms of *General Debility, Dyspepsia, Copious Uterine Leucorrhœa* and *Retroversion of the Womb, etc.*, the experiment was sufficient to satisfy me of the vrtue of the "Iron and Alum Mass," to relieve this class of female diseases, far superior to the Dialysed Iron, now so greatly lauded as a tonic. FREDERICK HORNER, JR., M. D., Surg. U. S. N.

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I consider the "Iron and Alum Mass" a very valuable remedy for all diseases dependent upon deranged conditions of the secretions of the liver and kidneys.
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1878.

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BELLEVUE HOSPITAL MEDICAL COLLEGE.

City of New York.

Member of the American Medical College Association.

SESSIONS OF 1878-'79.

THE COLLEGIATE YEAR in this Institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Spring Session.

THE PRELIMINARY AUTUMNAL TERM for 1878-1879 will open on Wednesday, September 18, 1878, and continue until the opening of the Regular Session. During this term instruction, consisting of didactic lectures upon special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term, clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

THE REGULAR SESSION will begin on Wednesday, October 2, 1878, and end about the 1st of March, 1879.

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Emeritus Professor of Obstetrics and Diseases of Women, and President of the Faculty.

JAMES R. WOOD, M. D., LL. D.,
Emeritus Professor of Surgery.

FORDYCE BARKER, M. D.,
Professor of Clinical Midwifery and Diseases of Women.

AUSTIN FLINT, M, D.,
Professor of the Principles and Practice of Medicine and Clinical Medicine.

W. H. VAN BUREN, M. D.,
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LEROY MILTON YALE, M. D.,
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A distinctive feature of the method of instruction in this College is the Union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day except Saturday, two or three hours are daily allotted to clinical instruction.

The Spring Session consists chiefly of Recitations from Text-books. This term continues from the first of March to the first of June. During this Session daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Regular clinics are also given in the Hospital and in the College Building.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the lectures during the Preliminary and Regular Term, including Clinical Lectures,	$140 00
Matriculation Fee	5 00
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Graduation Fee	30 00

FEES FOR THE SPRING SESSION.

Matriculation (Ticket good for the following Winter)	$5 00
Recitations, Clinics and Lectures	35 00
Dissection (Ticket good for the following Winter)	10 00

Students who have attended two full Winter courses of Lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery and Obstetrics only.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address Prof. AUSTIN FLINT, Jr., Secretary Bellevue Hospital Medical College.

TO THE MEDICAL PROFESSION.

MALTINE

EXTRACT OF MALTED BARLEY, WHEAT AND OATS.

THIS PREPARATION
Contains from three to five times the Medicinal and Nutritive elements found in the Extract of Malt.

MALTINE is a highly concentrated extract of malted *Barley*, *Wheat* and *Oats*, containing, undiminished and unimpaired, all the medicinal and nutritious principles found in these cereals. By the most carefully conducted scientific process we are enabled to offer to the medical profession a perfect article, possessing from *three* to *five times* the therapeutic and nutritive merit of any foreign or domestic Extract of Malt.

In support of our claims we invite the attention of the profession to the following points, viz.:

FIRST: In the manufacture of MALTINE the evaporation necessary to reduce it to its great density is conducted in vacuo, at a temperature ranging from 100° to 120° Fahr.; while most manufacturers of Extract of Malt resort to "open pan" or low pressure steam boiling, by neither of which processes can the extract be so produced as to preserve the Diastase, Phosphates and Albuminoids on which its remedial value so greatly depends, and the product is either of a dark color or of low specific gravity, possessing little virtue aside from the saccharine matter which it contains.*

SECOND: Carbon, Hydrogen, Nitrogen, Phosphorus, Sulphur, Iron, Magnesium and *Potassium* are essential elements in the food of man, and it is only in MALTINE, containing the combined properties of malted *Barley*, *Wheat* and *Oats* that all these principles can be found in the proper proportions; Extract of Malt made from *Barley alone* is wanting in some of the most important of these elements.

THIRD: Gluten is the most nutritious principle found in the cereals, and is the only vegetable substance which will, alone, support life for any great length of time. It is composed of three distinct nitrogenous principles, together with fatty and inorganic matters, and is analogous to animal fibrin. MALTINE contains twenty times the quantity of *Gluten* found in any Extract of Malt.

FOURTH: LIEBIG says "Wheat and Oats stand first among our list of cereals in combining all the elements in proportion necessary to support animal life. They are especially rich in muscular and fat producing elements." The only reason we use Malted Barley in the manufacture of MALTINE is that it contains larger proportions of mineral matter (bone producers,) and Diastase. It is deficient in all other essential elements.

We believe that any practitioner will readily recognize the superiority of MALTINE, and request a trial and comparison of merits with any article offered for similar uses.

* As a sure test for Diastase, and the Albuminoids a small quantity should be put in a test tube or small vial, largely diluted with Water, and heated to the boiling point, when the Albumen, if present, will coagulate, and appear in little flocculent particles throughout the liquid. If the extract remains clear, it is proof that it had already been copulated by excessive heat, and removed by filtration during the process of manufacturing. Any heat which will coagulate Albumen will inevitably destroy the digestive power of Diastase.

The Nitrogenous constituents of MALTINE have a composition identical with that of the chief constituents of the Blood, and therefore contain nearly every element requisite for the reproduction of the human body.

MALTINE AND ITS COMPOUNDS

can undoubtedly be used with greater success than any other remedy now known, in cases of general and nervous Debility, Indigestion, imperfect Nutrition and deficient Lactation; Pulmonary affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membrane and difficult expectoration; Cholera Infantum and wasting diseases of children and adults; Convalesence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

WE MANUFACTURE THE FOLLOWING PREPARATIONS, THE FORMULAS AND DOSES OF WHICH ARE GIVEN IN OUR DOSE BOOKS AND ON THE LABEL ATTACHED TO EACH BOTTLE.

MALTINE **With Hops.**

MALTINE, **Ferrated:**

This combination is specially indicated in Aæmia and Chlorosis, and in all cases of defective nutrition where Iron is deficient in the system.

MALTINE **With Phosphates Iron and Quinia:**

A powerful general and nutritive tonic.

MALTINE **With Phos. Iron, Quinia and Strychnia:**

A powerful nutritive, general and nervous tonic.

MALTINE **With Pepsin and Pancreatine.**

One of the most effective combinations in Dyspepsia, Cholera Infantum and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constitutents of the MALTINE. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nurtritive qualities.

MALTINE **With Beef and Iron:**

One of the most valuable combinations in case of general Debility, where there is deficient nutrition and a deficiency of Iron in the system.

MALTINE **With Alteratives:**

In this preparation MALTINE is combined with the most valuable Alteratives known, such as Iodides, Bromides and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula and all depraved conditions of the blood.

MALTINE WINE.

This preparation contains all the medicinal and nutritive constituents of MALTINE, less 60 per cent. of the transformed starch or glucose, which renders the preparation lighter and more acceptable to some stomachs, and is recommended only in such cases.

MALTINE WINE **With Pepsin and Pancreatine:**

(*Each fluid ounce of MALTINE WINE contains* 15 *grains pure PEPSIN and* 15 *grains pure PANCREATINE.*)

We can recommend this preparation to the Medical Profession as being the most important remedy ever brought to their notice in all cases of Dyspepsia and imperfect Nutrition, when the system needs invigorating and replenishing. It will be found, we believe, a perfect remedy in Vomiting in Pregnancy, Cholera Infantum and wasting diseases of children, and in Constipation and Chronic Diarrhœa resulting from mal-nutrition. It will agree with the most irritable stomach.

MALTO-YERBINE.

(*Each pint of the above preparation contains* 13 *ounces of MALTINE*, 2 *ounces CARRAGEEN and* 1 *ounce of YERBINE.*)

With the nutritive, emolient, and demulcent properties of MALTINE and CARRAGEEN, and the expectorant qualities of YERBINE, (active principle of Yerba Santa,) we offer this preparation with the fullest confidence that it is the most perfect remedy yet produced in Chronic Pulmonary Affections, Irritation of the Mucous Membrane, Difficult Expectoration, Bronchitis, and ordinary Coughs and Colds.

The Dose of all preparations of MALTINE and compounds is from a dessert to a tablespoonful.

We also manufacture a perfectly prepared EXTRACT OF MALT, from *Barley only*. *MALTINE* preparations are sold at the same price as EXTRACT OF MALT and its combinations, and are put up in half-pint, pint and five pint amber bottles; each bottle inclosed in a folding paper box

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WYETH'S DIALYSED IRON.

(FERRUM DIALYSATUM.)

A Pure Neutral Solution of Oxide of Iron in the Colloid Form. The Result of Edosmosis and Diffusion with Distilled Water

PREPARED SOLELY BY

JOHN WYETH & BRO.,

PHILADELPHIA.

This article possesses great advantages over every other ferruginous preparation heretofore introduced, as it is a solution of Iron in as nearly as possible the form in which it exists in the blood. It is a preparation of invariable strength and purity, obtained by a process of dialysation, the Iron being separated from its combinations by endosmosis, according to the law of diffusion of liquids. It has no styptic taste, does not blacken the teeth, disturb the stomach, or constipate the bowels.

It affords, therefore, the very best mode of administering

IRON

in cases where the use of this remedy is indicated.

The advantages claimed for this form of Iron are due to the absence of free acid, which is dependent upon the perfect dialysation of the solution. The samples of German and French Liquor, Ferri Oxidi Dialys., which we have examined, give acid reaction to test paper. If the dialysation is continued sufficiently long, it should be tasteless and neutral.

Our Dialysed Iron is not a saline compound, and is easily distinguished from Salts of Iron, by not giving rise to a blood-red color on the addition of an Alkaline Sulpho-Cyanide, or a blue precipitate with Ferro-Cyanide of Potassium. It does not become cloudy when boiled. When agitated with one part of Alcohol and two parts of Ether (fortior) the Ether layer is not made yellow.

Physicians and Apothecaries will appreciate how important is the fact that, as an antidote for Poisoning by Arsenic, Dialysed Iron is quite as efficient as the Hydrated Sesquioxide (hitherto the best remedy known in such cases) and has the great advantage of being always ready for immediate use. It will now doubtless be found in every drug store, to supply such an emergency.

Full directions accompany each bottle.

Physicians will find our **Dialysed Iron** in all the leading Drug Stores in the United States and Canada.

It is put up in bottles retailing for **One Dollar**, containing sufficient for two months' treatment. Large size is intended for hospitals and dispensing. Retail at $1.50. Price Lists, etc., sent on application.

JOHN WYETH & BRO.

PEPTONIC PILLS.

Pepsin, Pancreatin, with Lacto-Phosphate of Lime & Lactic Acid.

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This pill will give immediate relief in many forms of Dyspepsia and Indigestion, and will prove of permanent benefit in all cases of enfeebled digestion produced from want of proper secretion of the Gastric Juice. By supplementing the action of the stomach, and rendering the food capable of assimilation, they enable the organ to recover its healthy tone, and thus permanent relief is afforded. One great advantage of the mode of preparation of these pills is the absence of sugar, which is present in all the ordinary Pepsin and Pancreatin compounds—in this form the dose is much smaller, more pleasant to take, and is less apt to offend the already weak and irritable stomach. The results of their use have been so abundantly satisfactory, that we are confident that further trial will secure for them the cordial Approval of the Medical Profession and the favor of the general public.

Each pill contains one grain of pure Pepsin, and one of pure Pancreatin, which is equivalent to 10 grains of the ordinary or saccharated usually prescribed and dispensed. Physicians will appreciate the great advantage of this mode of administration, the increased benefit to the Dyspeptic being due to a full and effective dose of each, freed from the unnecessary bulk, and really hurtful addition of sugar. A single pill will give immediate relief.

DIRECTIONS.—Take one pill immediately after eating or when suffering from Indigestion, Lump in the Throat or Flatulence. For children reduce the pill to powder and give a fourth or half, according to age.

JOHN WYETH & BRO.,

CHEMISTS, PHILADELPHIA.

Mensman's Peptonized Beef Tonic.

The great necessity for a fluid food that would possess *all the elements necessary for the support of the system* having been long felt by the Medical Profession, we call attention to this preparation, containing the *entire nutritious properties* of the muscular fibre, blood, bone, and brain of a healthy bullock, dissolved by aid of heat and pepsin, and preserved by spirit; thus constituting a perfect nutritive, reconstructive tonic.

It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating, and life-sustaining properties, pre-eminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and recruit the tissues and forces, whether lost in the destructive march of such affections, or induced by overwork, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. bottes.

"DR. MENSMAN'S BEEF TONIC

"Is a complete representative of lean and fat beef, bone, blood, and muscle. It consists of all the properties which combine in the development of the animal body, which are liquefied by an artificial process, simulating natural digestion, and retaining all of their alimentary values. It contains in their perfection all the natural elements of the meat in their natural quantitative relations, without their extraneous or indigestible properties, and therefore requiring the least possible effort on the part of the stomach for its conversion into chyle, and its immediate absorption by the system.

"This Tonic is free from any drugs or chemicals, and is a great invigorator or recuperant. I have used this preparation in several cases of sickness of a character which enables me to give the most favorable opinion of its great value, in extreme sickness. Some of the cases referred to are hemorrhage of the bowels, typhoid fever, bilious fever, inflammation of the bowels, where the greatest possible prostration was present, and in which I found this meat tonic to accomplish results I could not obtain with any other preparation. It is a gentle stimulant, and allays the peculiar irritation of the stomach, which destroys the appetite in all forms of disease, when the tone of the stomach is destroyed."

"We published the above article in the November Number of 1877, and will say that we have prescribed the tonic daily to date with the very best results.—ED. MED. ECLECTIC."

THE BEST THREE TONICS OF THE PHARMACOPŒIA:

Iron, Phosphorous, and Calisaya.

We call the attention of the Profession to our preparation of the above estimable Tonics, as combined in our elegant and palatable **Ferro-Phosphorated Elixir of Calisaya Bark**, a combination of the Pyrophosphate of Iron and Calisaya never before attained, in which the nauseous inkiness of the Iron and astringency of the Calisaya are overcome, without any injury to their active tonic principles, and blended into a beautiful amber colored Cordial, delicious to the taste and acceptable to the most delicate stomach. This preparation is made directly from the **ROYAL CALISAYA BARK**, not from **ITS ALKALOIDS OR THEIR SALTS**—being unlike other preparations called "Elixir of Calisaya and Iron," which are simply an **Elixir of Quinine and Iron.** Our Elixir can be depended upon as being a true Elixir of Calisaya Bark with Iron. Each dessertspoonful contains seven and a half grains Royal Calisaya Bark and two grains Pyrophosphate of Iron.

PURE COD LIVER OIL,

Manufactured on the Sea-Shore from Fresh and Selected Livers.

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ARTICLE XVIII.

EMOTIONAL INSANITY. By J. K. BAUDUY, M. D., Professor of Nervous and Mental Diseases in the Missouri Medical College, and Physician to St. Vincent's Institution for the Insane.

GENTLEMEN:—Insanity is necessarily a disease that must interest you all, because it is a physical affliction which sooner or later may invade the sacred precincts of your own homes. It is a disease which, in the present condition of society, is becoming extremely rife, keeping pace, some authors claim, *pari passu* with advancing civilization.

A certain fascination clings to the study of mental pathology. Present clinical observations teach us that the wear and tear, the stress, the contentions, troubles, competitions and annoyances of every day life, engulf many minds, so constituted in consequence of inherent weaknesses, as not to be able to resist such inevitable influences. In other words, as men must bear the strain and friction of every day life, insanity correspondingly increases.

In the present moment of pathological enlightenment, the fact that insanity is unquestionably a disease of the brain should

admit of no dispute. The interest of its study will be enhanced by our natural efforts to unravel its multitudinous phenomena; and in seeking for explanations of its Protean manifestations, we are oftentimes compelled to dip deeply into the labyrinths and mysteries of brain action. Of the latter, it is true, we have much to learn; nevertheless, the researches of modern science have not been entirely fruitless, but on the contrary have been productive of the most excellent, if not, perhaps, remarkable results.

We can at least, in consequence of this progress in the right direction, dismiss the old mythical theories of the methaphysicians, the representatives of obsolete views never again to be rejuvenated, which taught people to believe that in dealing with the phenomena of insanity, they were witnessing or combatting nonentities, shadows, spiritual processes, mystical conditions of still obscurer origin, as opposed to the purely physical symptoms, the outcroppings or manifestations of brain lesions, rendered more or less demonstrable in all cases, when subjected to the crucible of modern investigation.

Formerly insanity involved social ostracism, and the prejudices which its supposed stigma originated, exist with marvelous pertinacity even in the present day, notwithstanding the teachings of science to the contrary. It was considered necessary that the victim of this disease should forever be sequestered from society, and his misfortune involve in equal disgrace his family.

Now that we know insanity to be simply a physical affliction, instead of a *morbus sacer*, and the result of certain well-recognized pathological deviations; that it not infrequently originates in congestions and inflammatory conditions of the brain; and that just as pneumonia is an inflammation of the lungs, pleuritis an inflammation of the pleura, and nephritis an inflammation of the kidneys, so is insanity a departure from the physiological status of the brain, necessary for the proper evolution of healthy mental and emotional phenomena, having its starting point in the same vascular and irritative disturbances which give rise to other pathological states.

Van du Kolk divided insanity into idiopathic and sympathetic insanity. The former primarily originates in the brain proper, the latter is but the reflex radiation of remote disturbances, starting frequently in other parts of the human organism, and propagated in constant irritative waves towards the central organ of the nervous system. Diseases of the viscera, whether sit-

uated in the pelvic, thoracic or abdominal cavities, are common causes of insanity. The latter malady, in such instances, is superinduced by the disturbances which these organs produce, reflecting them back upon the brain, exciting congestions and inflammatory conditions, which sooner or later lead to the aforesaid development.

Such a result is not astonishing, when the wonderful sympathies of the brain, with every immediate and remote portion of the human economy, is taken into consideration. The intimate relations of the brain with every other organ, blending various interests in one harmonious whole for the common weal of every integral portion of the body, is an indisputable fact.

This is still less difficult to appreciate, when it is recollected that the brain is the supreme center, presiding over all other parts of the nervous system, and the animal economy. Indeed we can hardly conceive of any constituent atom of the body, no matter where found, which is not in more or less intimate relation with the brain. It presides over multitudinous atoms, its influence is felt throughout the entire body, and there is not a muscle, nerve, artery or vein, not even the smallest, most insignificant and unimportant histological element in the human system, but is permeated directly or indirectly by the peculiar nervous force or influence emanating from the "supreme cerebral ganglia." Hence, may it be well said, as stated by a certain writer, that when a man becomes insane, he is insane to the very tips of his fingers.

The brain may truly be said to be the seat of the regulative force of all the phenomena of the mind, of the emotions, intellectual acts, and volitional manifestations.

The term insanity is comprehensive in character. When we speak of insanity in general, we do not allude to one particular form of the disease, but we include in the term a multitudinous variety of morbid brain manifestations; just as the word tumor has frequently the most varied significance, suggestive as it is of many physical varieties and characteristics, numerous classifications, terminations and pathological origins. So the word insanity is to the psychological physician, a mine so rich and varied in its productions, so deep, intricate and labyrinthic, as to be quite inexplorable to the limit we desire. You can therefore form some adequate idea of the comprehensiveness of this term insanity.

Before studying emotional insanity in particular, we will now consider some points connected with the general subject of insanity.

Is there anything in the aspect or appearance of the insane, which will enable us invariably to recognize the existence of the disease by a casual observation of the physiognomy? A fallacy of very common occurrence exists in this connection.

During medico-legal contests, we often hear allusions by the contesting lawyers to the "wild eye of the insane," as a proof of incontestable alienation. This method of recognition of the disease rests upon a very unscientific basis.

All physicians who are familiar with the phenomena of insanity, and are accustomed to explore "the mind diseased," in judging of the presence or absence of the former, know full well the difficulty and fallibility of conclusions based upon such premises.

A careful study and analysis of the physical conditions, or symptomatic manifestations of insanity, clearly indicate how little can be determined by attention to the countenance alone. Let any person who doubts this assertion visit the wards of a lunatic asylum, and after the purely demented patient has been withdrawn (whose features unmistakably and too plainly indicate the departure of all reason and expression), let him examine the vast preponderance of patients who remain, engaged as they will be found, in billiards, chess, the perusal of periodicals and the enjoyment of cards, and let him then, even while giving an attentive ear to their conversations, and whilst studying their features, determine from these facts alone whether or not reason be dethroned. His task would be one of herculean magnitude. It must not be imagined that insanity is an affection the existence of which we hastily conclude to be present, without the most careful scientific analysis and scrutiny.

It is not to be supposed for one moment that medical experts experience convictions as to the presene or absence of mental aberration without most carefully subjecting the data which mould their opinions to the same laws of diagnosis as are applicable to all other diseases. Without such a procedure their investigation would be a farce unworthy of scientific men.

With a careful adherence to such methods of observation, based upon broad principles of medical science, the deductions from certain premises will be susceptible of proof and remain

established upon a firm and immovable basis. Just as in the diagnosis of pneumonia, auscultation and percussion, constituting the physical examination, are conjoined by the prudent physician with a due consideration of the rational symptoms, so in the diagnosis of insanity, all the facts, with an attentive study of all collateral phenomena, must be collectively weighed. What then are the logical deductions upon which to predicate an opinion of insanty?

1. *Hereditary predisposition* is one of the many important links of the pathological chain of sequences which has to be developed in the diagnosis, and is one to which the physician first directs his attention. Ancestral taint, the fact that the parentage of the particular person undergoing investigation is tinctured with previously existing insanity, or allied neurotic affections, must never be lost sight of for a moment. Persons having such an unfortunate inheritance are the victims of an unstable constitution of nervous equilibrium which the most trivial circumstance may overtopple; the victims "of the worst of all tyrannies, the tyranny of a bad organization." That it is inherent in most instances there can be no doubt.

In insanity, as in other maladies, a great many facts are manifest which we would not be able to interpret but for the assumption of predisposition or hereditary transmission.

In many conditions of life numerous people become insane, while others subjected to exactly the same influences will experience no deviation from their normal mental health. This tendency to insanity is therefore but too frequently an heirloom.

2. *Causation* is the next step for consideration in diagnosis. *Predisposing causes*, including sex, period of life, condition of life, individual predisposition, education and many other conditions must be studied.

Exciting causes, subdivided into *physical* and *moral*, next demand attention. Relegated to the former are such influences as intemperance, masturbation, epilepsy, chronic diseases which deteriorate the blood, which latter conditions are prolific of insanity, based upon Cicero's well-known maxim, *mens sana in corpore sano*. Then again, injuries of the head, lactation, pregnancy, uterine diseases or disturbances, puberty, the climacteric period all are of the utmost significance in an etiological sense.

Of the moral causes Maudsley claims that "it is not in the way of great intellectual exercise when unaccompanied by

emotion, to lead to mental derangement; it is when the feelings are deeply engaged, when the mind is the theater of great passion, that it is most moved and its stability most endangered."

Anxiety, jealousy, sorrow, disappointed affection or ambition, are powerful factors in this regard. Causation, therefore, plays a most important part in our diagnosis of insanity.

But it is more especially a *concurrence* of causes that leads to a development of the disease. If we knew all the causes leading to insanity, or could foresee contingencies which may arise, then we might venture to predict insanity in certain individuals or families at particular periods of their lives.

However, insanity does not depend upon one, or a few, but upon a *multiplicity of causes*; and, as Maudsley remarks, "hereditary, predisposing, moral and physical causes are not alone necessary, but a combination, a concurrence of conditions, and then lunacy follows."

In a word, before dismissing the study of causation, various potentialities, the existence of disease, acute or chronic, which leads through physical developments to the production of insanity; particular conditions of organism; all varieties of physical deteriorations; impaired or impeded nutrition; poisoned conditions of the blood; excessive functional activities, however produced; the absence of sleep; reflex actions or sympathies; quantitative as well as qualitative disturbances of the circulation, are all powerful factors in the production of mental disease requiring the psychological physician's closest scrutiny.

The development of psychic functions and their conformity to a physiological type, require a healthy brain for their proper evolution. Diseased brains lead to culminations of morbid, mental and emotional manifestations and phenomenal deteriorations known as insanity.

Brains intellectually overworked, emotionally overexcited, like poor jaded horses tasked too heavily, suffer their functional activities to be overwhelmed, and without sufficient vital recuperative powers total ruin and wreck inevitably follow.

That moral causes, especially the depressing passions, should prove energetic agents in the production of mental disease, need not excite our astonishment. Moral shock not infrequently overwhelms the entire emotional and physical nature of the individual. That powerful emotions are productive of disease, nay, even death, all are aware. Medical literature is stored with facts which prove

conclusively, that the hair sometimes turns gray in a single night. Maudsley (Body and Mind) observes "that a sudden and great mental shock may, like a great physical shock, and perhaps in the same way, paralyze for a time all the bodily and mental functions, or cause *instant death*."

3. *Change of character, without any adequate external cause*, is the next link of importance in the diagnostic chain we are forging, without which all our efforts to establish the existence of insanity in a given case would be invalidated. Its importance is pre-eminent. It is the pivot on which the diagnosis turns. This change consists in a departure from one's normal self, not merely supposititiously nor hypothetically, but a change established, as all other facts proven or subjected to, the rigid scrutiny of scientific analysis.

Daily actions, sentiments, natural impulses, propensities, passions, moral dispositions, feelings, affections, inclinations, habits are compared with *a normal standard*, a departure from which must be evident to those whose previous acquaintance and intimate relations with the subject of inquiry, peculiarly adapt them for reaching proper conclusions and indisputable decisions in this connection.

Reliance must inevitably be placed under these circumstances by the physician upon the experience, observations and inferences of near relatives, who are better qualified to judge of early abnormities or deviations of the affective life, than the most skillful diagnosticians imaginable.

A mother, for example, could incontestably better establish a change of character in her child, than any other person conceivable. The physician must, however, satisfy himself as to the absence of all possible motives of human action, and all other external adequate causes, which in the absence of *disease*, would sufficiently explain these singularities of conduct, eccentricities of action, and changes in one's natural self, or a departure from that type previously characteristic of the individual.

This departure consists in a multitudinous variety of alterations which it is the duty of the physician to develop. This must so change the person under investigation, that he ceases, as it were, to be the same individual that he was. I am making no reference to discoverable intellectual perversions. I am simply considering deviations in the affective life, presented only in an analysis of actions, as expressive of morbid feelings,

not of words, as illustrative of disordered ideas. The social, domestic, religious and business habits and antecedents must be scrutinized with the utmost rigidity and fullness of detail. Heretofore, an affectionate husband and tender father, the caresses lavished upon his family cease; he repels the advances of his little flock which before constituted his delight; there is a sad revolution in his home life, and the dear ones of his fireside are the first to recognize the stern reality which confronts them. This recognition of the patient's abnormal condition occurs long prior to any overt act of insanity or explosive violence.

The bursting of the storm is long predicted, however, by the keen perception of those whose intimate relations with the patient have caused them to realize its direful foreshadowings. So in all other conditions of life, whether social or domestic, these changes will be perceptible.

Men of strong religious natures and convictions, suddenly become rash, intemperate, obscene, desperate and utterly depraved. These transitions develop themselves without the most intimate friends being enabled to assign the why or wherefore.

An eminent and learned divine, distinguished for his social virtues, his high religious aspirations, disinterestedness, the center of attraction and adulation of his flock, admired, loved and respected by all, pre-eminent for his sanctity and christian perfections, *suddenly, without external adequate cause*, becomes irreligious, intemperate, profligate, and wretchedly dissipated. Suppose, moreover, without notice, he indulges homicidal or suicidal propensities of *recent* development, would we not judge him either a confirmed lunatic, or previously a consummate hypocrite? for the study of his life would inevitably confirm one or the other hypothesis.

Or suppose a parsimonious man, taking care of every dime, possessing a ceaseless and sleepless solicitude for his worldly goods, never giving or expending anything, except for the absolute necessities of life, were suddenly, without adequate motive, to become excessively liberal, squandering his money as recklessly as formerly he had carefully hoarded it, would not such *conduct* point to a most suspicious perversion of feeling, and to a change of sentiment consistent only with insanity? Hence, the significance of actions, when contrasted with the previous conditions or antecedents of a patient.

The foregoing illustrations point especially, therefore, to the development of insanity of the affective type, without any particular concomitant evidences of the existence of morbid intellection.

In *business* relations, if heretofore one has been honest, upright, reliable, a representative man in his sphere of life, whether commercial or professional, a change so perceptible will manifest itself, as to cause his acquaintances to be staggered at its completeness and suddenness. The perturbation of his moral nature will be evident to his most casual acquaintances.

But gentlemen, think you this is all to be considered in this connection?

When you essay to diagnosticate insanity, you must not only dip deeply into the labyrinths of the questions I have already presented for your study, but you must carefully investigate all proven morbid tendencies with equal thoroughness. Suicidal and homicidal propensities are particularly to be examined. When such tendencies—motivelessly existing—are proven, they constitute strong corroborative proof for the presumption of the existence of insanity.

Such links being necessary to establish the existence of emotional insanity, we can but regret and deprecate opinions that once influenced a jury in a celebrated trial in New York State, to bring in the absurd verdict that a man was sane one moment prior to the commission of the homicide, insane during the homicide, and sane immediately subsequent to the act.

Such opinions bring science into disrepute, and constitute a prostitution of the plea of insanity, thus exciting the clamor of popular prejudice, when in the great cause of humanity mental alienation is sought to be proved in genuine cases.

4. *Want of harmony of the individual with his surroundings.* "It is important, therefore, that we have in remembrance the individual's social relations when dealing with moral insanity, as we regard the very different relations of an epithelial cell and a nerve cell when dealing with structures so far apart in the scale of life. It is chiefly in the degeneration of the social sentiments, that the symptoms of moral insanity declare themselves; it is plain that the most typical forms of the disease, can only be met with in those who have had some social cultivation."

This is a matter of the utmost importance to establish, for while we have seen that the change of character just studied,

and that "the morbid phenomena of the diseased mind—witness in some measure to the degree of its previous development, yet the degeneration which disease implies—must needs display itself in an alteration in the kind of manifestation of *feeling*, *thinking* and *acting*—in other words, in a changed self. While again the import, as morbid, of the phenomena displayed, can only be rightly weighed in relation to the individual sphere of life. It is, for example, quite possible, though apt to be forgotten in practice, *that sentiments and acts which are habitual in the lowest station of life may be sure signs of mental disease when uttered and done by one in a high social sphere.*"

There is under such circumstances a want of congruity existing in the social relations, a want of adaptation in the general and particular social harmony of the individual. "A cancer is physiologically illogical; nevertheless it persists, and finally kills the patient, being pathologically logical."

The individual who no longer constitutes a part of the general harmonious whole, for reasons "psychologically accountable," is no longer a unit in the social system as prior to the inroads of emotional perversion. "Insanity destroys the relations and responsibilities of the individual in the social system, making him very much like what a morbid element is in the organic system—something which can not take its due place in the general harmony, and which must either be eliminated from it or sequestrated and rendered harmless in it."

5. According to Maudsley, whose views we are developing, *the standard* by which to measure the perversion is, first, that of the *kind*, that which is fixed by the general consent of mankind; and secondly, that of the *individual*, that which is estimated by the degree of his previous mental development.

Therefore the individual frequently may perform acts which, when compared with his normal standard of action are not in any respect whatsoever characteristic of insanity, or the reverse may be the case. There exists, therefore, a standard which the common sense of mankind has established, by means of which all insane perversions are to be compared, measured and regulated.

By way of illustration let us glance at certain delusions and the significance thereto attached by such a standard. Suppose a patient tell us that a person came into his room through a keyhole, although he had long been familiar with the death of such

person, would a sane mind experience any difficuly in measuring such a vagary?

Take other delusions observed during the practical observations of the insane—where they imagine, for instance, that they are made of glass, or as in one case which I recall of a certain lady who believed that she was an hour-glass, and would request after the sand had run down during a certain time, "to be turned upside down, in order to allow it to run the other way." In such instances the evidences are so incontrovertible as hardly to need the application of the rule I have just enunciated.

6. *Corroborative proofs* of insanity often exist in cases under consideration. Assaults made upon beloved relatives and intimate friends; unaccountable and baseless aversions, especially when accompanied by violent assaults of a homicidal character, which have been perhaps preceded by suicidal propensities, are characteristic of the existence of insanity. Meditative moods, aimless schemes, deep reveries, fits of unusual abstraction, peculiarities and eccentricities of dress, want of tenacity of purpose in persons previously firm, indecent exposures, desires to remain nude, self mutilation, talking to self, squandering property, obscenity, filthy practices, destructive and intemperate habits, are all charteristic of insane people.

7. *The physical symptoms* of insanity should be diligently sought after in all equivocal cases of emotional insanity, viz: headache, insomnia, restlessness, constipation *et id omne genus*. In the concatenation of circumstances constituting the pathological links of the chain of the evidence of insanity, the careful, prudent physician will make patient and thorough inquiries in all these directions enumerated, before announcing his opinion from the witness stand. If all heretofore stated be true, the diagnosis of *emotional* insanity is one of a very complicated character, and the physician who makes it should divest himself of all partiality and should most carefully subject the analysis of his case to the closest scrutiny of scientific investigation. In other words, like any other diagnosis in the field of medical inquiry, it should rest solely upon the merits of the naked facts.

Division of Insanity into two Principal Groups—a. *Affective or emotional insanity*. b. *Ideational or intellectual insanity*. I shall not attempt in this lecture to enter into various and numerous classifications of insanity. Maudsley's division into two

principal groups, the ideational and emotional, is the greatest advance which has ever been made in this direction, and recommends itself for its intelligibility and simplicity. With the ideational or intellectual variety we have nothing to do in this lecture.

Cases presenting delusions, hallucinations, illusions, dementia, and other perversions of the intellect must necessarily admit of easy interpretation. On the other hand, disturbances of the emotional or affective life may give rise to the greatest discrepancy of opinions, and I am sorry to say, even conflicting and contradictory statements upon the part of medical men. It should be understood that affective, pathetic and emotional insanity are synonymous expressions constituting one primary group, and that moral and impulsive insanity are but *subdivisions* of the former. The acts in all their manifestations alone form the subject of our inquiries.

It is necessary, gentlemen, to have impressed upon your mind at this juncture, a matter somewhat perplexing until properly explained, one that even medical men not sufficiently familiar with the Protean manifestations of insanity but too frequently overlook, namely, that the existence of intellectual insanity points to a perverted or disturbed condition of thought, and wherever this exists, a disordered state of ideas will exhibit itself in the *words* of the patient as expressive of morbid ideas.

Whenever, on the contrary, the emotional faculties are distorted, discordant *acts* springing from disorded *feelings* force themselves upon our attention as the phenomena to be studied and investigated. How do we manifest our feelings? Is it not by our actions? "Feelings mirror the real nature of the individual, and are the springs of action." Therefore as you study perverted thought by the expressions of incoherent words, so are you to study the disturbances which exist in the affective or emotional faculties by the development of insane *acts*.

Thence in some forms of insanity, all the phenomena are to be studied by insane *words*; in other forms—and they are multitudinous in their varieties and shadings—the manifestions of insanity are to be studied by insane *actions alone*.

In addition to this it might be stated that the *fundamental fact* connected more or less indirectly with all forms of insanity is always perversion of the affective life; it is the underly-

ing current influencing and moulding all other varieties of the affection, insane manifestations and phenomena.

Persons, at the commencement, generally become insane through a want of proper co-ordination of their feelings. This is the first step outside the limits of mental health. Affective insanity is the deeply-rooted morbid state, of which all the other phenomena are the outcroppings. Hence intellectual insanity is nearly always preceded by the affective form. Again, if the intellectual form be developed, it is usually in *combination with the affective form,* and if it be cured, *the affective form generally lingers, and is the last to disappear.* We can now understand that the *affecti veor emotional form of insanity is the fundamental fact* with which we must thoroughly familiarize ourselves, in order to fully comprehend all the bearings and collateral facts connected with the philosophical study of the general subject of insanity. Affective or emotional perversions, therefore, are the precursors of all phenomena culminating in convulsive action and moral irresponsibility. Esquirol claims "moral alienation to be the proper characteristic of mental derangement." "There are madmen," he says, "in whom it is difficult to find any trace of hallucination, but there are none in whom the passions and moral affections are not perverted and destroyed. I have in this particular met with no exceptions." Maudsley in commenting upon this quotation, adds, "This experience is in entire accord with that of every observer of insanity, and with the principles of a sound psycology. It is the feelings that reveal the genuine nature of an individual; it is from their depths that the impulses of action are born, while the intellect guides and controls; and accordingly in a perversion of the affective life, is revealed a fundamental disorder of the innermost nature, a disorder which will be exhibited in acts, as opposed to intellectual disorder, which will be exhibited in words."

"To insist upon the existence of a delusion as a criterion of insanity, is to ignore some of the gravest and most dangerous forms of mental disease."

The importance of an analysis of the feelings in the study of insanity cannot, therefore, be exaggerated. The deep, occult subtilities of emotional life, constitute the open sesame to psychological inquiry. "By his acts, as well as by his speech, does man utter himself; gesture language is as natural a mode of expression as speech; and it is in insanity of action that this most danger-

ous form of affective insanity is expressed, most dangerous indeed, because so expressed."

His actions are, therefore, the mirrors of his feelings, the outcomings of the innermost recesses of his nature, of that unconcious activity which so often moulds imperceptibly, but surely, the destinies of man.

Men are, therefore, sometimes from disease, unquestionably unable to act rationally, normally and consistently, being, from deep-seated perversion of the affective life, insane. We all study individuals through their actions. Inborn, unconcious influences sway the pendulum of life from the cradle to the grave.

We need not wonder that affective insanity is the most dangerous form of madness; a man with delusions or other evidence of intellectual aberration is soon locked up; but a man emotionally insane, but too often commits some overt act of violence before he sufficiently rivets attention to make public opinion demand his sequestration. Not that I attach undue importance to a given act. On the contrary, as I have stated before, I believe no isolated fact or act in itself capable of proving insanity, no matter how great its enormity, its absence of motive or other unaccountable features.

Suicidal and homicidal propensities—erotomania, kleptomania, pyromania, etc., do not *per se* constitute distinct forms of insanity as was formerly taught. On the contrary, I believe with Maudsley and Blandford, that such conditions are but purely symptomatic indications of a previously existing insanity. Blandford says "besides the homicidal monomania, we hear of others as erotomania, kleptomania and pyromania."

"Having already stated that I do not consider homicidal monomania to be a specific disease, I still less acknowledge that the acts which these terms indicate proceed from special disorders. They are committed by insane patients of various kinds; the insanity is not likely to be confined to one of these acts, but is sure to be noticeable in other ways, if it exist at all.

To take the last one mentioned, pyromania, we might as well erect into a special form, the window-breaking mania, etc."

Maudsley observes, "So far from the morbid impulse or act constituting insanity, it is but the outward and visible sign or expression of a profound affective derangement, the tendency of which is to manifest itself, not as ideational insanity does, in

words, but in acts, and which for this very reason is much more dangerous than ideational insanity."

"So far from the disease being simply a homicidal or suicidal insanity, it is truly an affective insanity, *one symptom* of which is homicidal or suicidal impulse; the delusion, when there is one, and the homicidal acts are later *symptoms of a deeper lying disease*; and the morbid manifestations of one may be as little within control as that of the other, or as the suddenly arising hallucination is. In the one case the patient is the victim of a morbid idea; in the other of a morbid movement; in both cases, of a convulsion more or less co-ordinate."

Hence the fallacy of attaching undue importance to isolated acts, would sometimes make us confound for a disease what is only a symptom. To establish a diagnosis under such circumstances, necessitates the discovery of other symptoms, otherwise the significance of an isolated act would not be invalidated.

If the public could be made to appreciate this fact, there would be less prejudice against the plea of emotional insanity, and less efforts upon the part of lawyers to bring it into contempt and disrepute by its constant prostitution. The diagnosis of emotional insanity rests necessarily upon so many different proofs as to make it no very easy matter to establish it beyond all possible cavil. Unless it can rest upon the ordinary laws of diagnosis which apply to all other diseases, it should not for a moment be established.

Emotional insanity is therefore known to exist by the history of the case, the existence of heriditary predisposition, the presence of some of the well-known conditions of causation, the change of character, the cessation of social harmony with surroundings, the corroborative circumstances, the impaired judgment of relations, the measuring of the perversion according to an individual standard, and that governed by the common sense or the general consent of mankind, the motiveless assaults upon relatives and intimate friends, the existence of some of the physical symptoms of insanity: in other words, our diagnosis is to be based upon all the above mentioned states, the etiological conditions, the sequence of symptoms, and the general course of the affection.

If you have grasped these facts, you are in possession, gentlemen, of the most important part of this subject, and to recapitulate in a concise manner, I will say, that as, in insanity, the feelings are first affected, it is through them we must study all

collateral phenomena. When a truly *insane* person commits homicide, suicide, rape or arson, it is the *result* of some serious form of insanity, such acts never constituting the insanity *per se*. They are, therefore, merely the outcroppings or symptomatic manifestations of a morbid condition of the emotional nature, and delusions are by no means the only evidences distinctive of mental disease, but are simply symptomatic of ideational insanity.

Overt acts of violence indicate a morbid condition of feeling, incoherent words, a morbid condition of thought, or, to make it plain, *just as insane words are produced by insane thoughts, so are insane acts produced by insane feelings.*

But some of you may inquire why it is that a person may be the victim of affective insanity only and not be necessarily intellectually insane at the same time?

In reply I would state, that such is the case, for the same reason that inflammatory conditions sometimes remain in *statu quo*, sometimes advance, sometimes recede. Is inflammation always followed by ulceration, sloughing suppuration, gangrene and other resulting phenomena?

So in a pyschological development, there may exist simply, the fundamental or affective form of insanity; there may never be developed during the case any manifestation of ideational insanity to complicate the situation; the trouble may not proceed so far.

DIVISIONS OF AFFECTIVE INSANITY.—*Moral Insanity.*—You have heard, gentlemen, perhaps, not very understandingly, about moral insanity and impulsive influences leading persons instinctively to perform certain acts which are atrocious in their nature. I shall discuss the consideration of the subject of impulsive insanity in a few words first alluding to moral insanity.

Suffice it to state once for all, that "*moral insanity is never moral depravity,*" and that in order to establish the existence of moral insanity, the physician regulates himself by precisely the same rules of diagnosis to which I have so recently alluded in the discussion of other forms of insanity. Of late years I have believed, notwithstanding the doctrines of Pritchard to the contrary, that a careful analysis of all cases of moral insanity will enable us to detect some evidences, although oftentimes it must be confessed, very feeble, of sure impairment, of frequent and accompanying mental weakening. Even the classic cases of

Pritchard, the founder of the so-called moral insanity, when carefully examined, will confirm this statement. There is one thing very certain, namely, that moral insanity, a revulsion more or less sudden of the emotional nature, of course produced by *disease*, like all other forms of insanity, is preceded by certain physical conditions, such as hereditary taint, epilepsy, suicidal attempts, "the insane temperament," and other influences which are to be taken into consideration. During our tentative efforts of examination, the diagnosis, therefore, can only become established upon an unquestionable basis, by an investigation of all the collateral and combined facts which lead to the development of moral insanity. Blandford says that "we meet with that form of insanity called *moral*, when the patient, either on the high road to intellectual insanity, or stopping short of delusions, shows his insanity in insane acts which he justifies in general alteration of character and intellectual defect."

A divine distinguished for sanctity, grown gray in the service of the church, suddenly, unaccountably, without adequate cause, commences to steal, becomes profane and obscene, would we not suspect insanity? On the contrary, innate parsimony, meanness, pusillanimity, suddenly and inexplicably replaced by lavish generosity, princely prodigality, magnanimity, and heroic courage, would more than awaken a suspicion of disease in our minds, would it not? Under such circumstances, will not the most skeptical be convinced of the existence of insanity which always implies a change in one's normal self in consequence of disease?

Impulsive Insanity.—In this condition, there is a development of that blind, sudden, instinctive fury very analogous to that condition which sometimes occurs under epileptic influences.

There are strong irresistible impulses to kill, destroy, or to attempt self-destruction and mutilation. Evidences of mental aberration are generally wanting. The victims of this form of insanity are haunted night and day by these morbid propensities which they frequently do not fully comprehend or appreciate, and sometimes even make strenuous efforts to resist.

Those outside of asylums will sometimes voluntarily subject themselves to confinement in order to prevent the indulgence of their impulses. Inmates of asylums will in some instances request mechanical restraints to be applied upon themselves with the same object in view. There always exists this relentless persecution of the victims of impulsive insanity, caused by the very

impetuosity of their furious, passionate and violent propensities. This vicious inclination constantly tends to attest itself in action from constantly culminating phases which, sooner or later, completely dethroning the volitional faculty, manifest themselves in explosive violence, or, as Maudsley contends, in convulsive manifestations.

The secret, then, of the physchological interpretation of this sub-division of emotional insanity is *annihilation of the will power*, which in point of fact constitutes the *very essence* of all insane acts. The particular perversions of the affective life are moulded into actions unaccompanied by the regulative effects of the will.

Of course the diagnosis of impulsive insanity is based upon the same irrevocable laws already fully amplified, and upon which all the other varieties of insanity rest in order to become established. With every inducement, therefore, to avoid a criminal act, and with a complete knowledge of its wickedness, one is yet impelled irresistibly to its achievement. "There is no relief for the pent up destructive energy but in an irresistible utterance of action." It is such cases, therefore, that give rise to serious medico-legal contests.

The impulsive variety, I believe, is never the first evidence of insanity. Dr. Blandford says: "I think you will find if you go to the root of the matter, the act which is supposed to be committed under the influence of insane impulse is rarely, if ever, the first symptom of insanity or brain affection shown by the alleged lunatic. You may be told by friends that they have never seen any insanity in him; but some people cannot see it in five out of six patients in an asylum. If you get sufficient information you will probably discover that he has had former attacks, from which he may or may not have been considered as recovered." Sheppard quotes Sankey to the effect that 'I have taken the precaution to read a large collection of reports, published from time to time in the *Annals Medico Psychologiques*, upon the state of the mind of persons accused of different acts of violence. I have never yet discovered a case in which an act of violence was committed by a lunatic as his first insane act. There are cases in which the patient was not considered insane by his own relatives, or by inexperienced practitioners, but who, on the closer scrutiny of the physician who had studied insanity, was clearly proven to have been so for a long period.'" Motivelessness of the act will be of importance in such cases, although in this con-

nection Wharton and Stille state per contra "*non-discovery* of motive is here taken as proof of *non-existence* of a motive, while it is undoubted that motives may exist for many atrocious criminal acts without our being able to discover them, a fact proved by the numerous recorded confessions of criminals before execution, in cases of which, until these confessions were made, no motive for the perpetration of the crime had appeared to the acutest minds." The burthen of the proof of the existence of impulsive insanity, therefore, rests upon the ordinary laws of medical diagnosis, to establish incontrovertible evidence of its presence or absence. Maudsley says "that there are not only perverted appetites, but there are perverted feelings and desires, rendering the individual a complete discord in the social organization. The morbid appetites and feelings of hysterical women and the singular longings of pregnancy are mild examples of a perversion of the manner of feeling and desire, which may reach the outrageous form of morbid appetite exhibited by the pregnant woman who killed her husband and pickled his body in order to eat it."

As an illustration of impulsive insanity I quote the following from Maudsley: "An old lady, aged seventy-two, who had several members of her family insane, was afflicted with recurring paroxysms of convulsive excitement, in which she always made desperate attempts to strangle her daughter, who was very attentive to her, and of whom she was very fond. Usually she sat quiet, depressed and moaning because of her condition, and was apparently so feeble as scarcely to be able to move. Suddenly she would start up in great excitement, and shrieking out that she must do it, make a rush upon her daughter, that she might strangle her. During the paroxysm she was so strong and writhed so actively that one person could not hold her; but after a few minutes she sank down exhausted, and, panting for breath, would exclaim, 'There! there; I told you; you would not believe how bad I was.' No one could detect any delusion in her mind.

The paroxysm had all the appearence of a mental convulsion, and had she unhappily succeeded in her frantic attempts, it would certainly have been impossible to say honestly that she did not know that it was wrong to strangle her daughter. In fact, it was because of her horrible propensity to so wrong an act that she was so wretched.

It is a sufficiently striking commentary on the present state of the English law, that had this patient succeeded in taking her daughter's life, sentence of execution must have been passed, and might have been carried into effect, notwithstanding she was so entirely insane and irresponsible." I would surpass the limit allotted to this lecture, were I to furnish you, gentlemen, with further illustrations of impulsive insanity. You can consult the literature of the subject, which abounds in them.

In the family of Baron von Humboldt, on one occasion his wife, on returning home, found the servant in tears, who immediately threw herself on her knees, and confessed her inability to remain in the house on account of an irresistible desire to kill their little child. This propensity she attributed to the whiteness of its flesh, which incited her homicidal tendency whenever, whilst bathing and dressing the child, she was left alone with it.

Maudsley quotes Schenck as relating "the history of a pregnant female, in whom the sight of the bare arm of a baker excited so great a desire to bite and devour it, that she compelled her husband to offer money to the baker to allow her only a bite or two from his arm. He mentions another pregnant female, who had such an urgent desire to eat the flesh of her husband, that she killed him and pickled the flesh, that it might serve for several banquets."

Medico-legal Aspects of Emotional Insanity—To the community at large, the plea of insanity is one of the utmost importance. The medical witness, therefore, has a double duty to perform, justice to the community, and justice to the prisoner at the bar; the former demands protection against crime and violence and the latter, *if insane*, has not forfeited his claims to the dictates of ordinary humanity. The abuse of the plea of insanity at the present day is fraught with great evils and is therefore constantly derided by the press and the public.

Yet, gentlemen, I am convinced that your humanity will not permit you to dispute the fact that where real insanity is *proven*, that it would be most unjust, not to say barbarous, to subject to the extreme measures of the law, a person whose volitional powers are impaired or destroyed, and who therefore must necessarily be morally irresponsible.

Hence, I think with Forbes Winslow in his "Plea of Insanity" that it would be proper and just to leave the jurisdiction of

these cases to a medical commission of experts. This was done with very satisfactory results by the late Judge Primm of this city in the Cronenbold case, thereby saving the State the expense of a long trial and doubtful conviction. He organized a commission of five experts who were empowered to examine witnesses under oath, and upon the return they made Cronenbold was sent to an insane asylum, where he still remains.

I am of the firm and unchangeable conviction that simple justice requires that wherever a man, after committing a homicide, be liberated upon the plea of insanity, that *ipso facto* he should be sentenced to a lunatic asylum *for life*, because in case of supposed recovery no one would assume the responsibility of offering an assurance that sooner or later there would not be a recurrence of his dangerous disease which had already deprived one fellow being of life. On the contrary, every physician is well aware that one attack of insanity predisposes to the development of subsequent attacks and that therefore from the very nature of the act, and the probability of recurrence from the very nature of this disease, if a man has once deliberately taken the life of a fellow creature in consequence of want of proper volitional control, produced by the disease of the brain we term insanity, then for life he should be deprived of liberty and never again be afforded a chance to perpetrate other deeds with which to shock and paralyze the community in which he lives.

When Joseph Fore, after being acquitted upon the plea of emotional insanity, was liberated in this city, it was simply an outrage and injustice which no terms are strong enough to condemn. Subsequent events proved conclusively the dangerous and destructive tendencies of this man, whose days should have been passed amongst the insane instead of convicts. Physicians therefore should pass upon the plea of insanity—not lawyers or judges; the former studying the phenomena of insanity with patience and accuracy, while the latter are utterly ignorant of the necessary fundamental knowledge of the subject.

Physicians are constantly with the insane. They examine the brains of those afflicted with mental disease, after having previously versed themselves in the laws of brain physiology. Clinical, physiological and pathological research and study, therefore, peculiarly constitute them the interpreters of the manifestations and phenomena of the mind diseased. Would it not be absurd to require a physician to pass upon some abstruse

and important legal question, or some mechanical problem, or metaphysical proposition?

Who is more familiar with all the phases, complications, variations and Protean characters of mental alienation than the psychological physician? Therefore, is it to be wondered at that there is such a wonderful antagonism existing betwen medical and legal minds upon this vexatious sea of contentions concerning emotional insanity?

Antagonisms the more to be regretted because those who from their studies and vocations must necessarily keep a abreast of the progess constantly being made in the field of psychological medicine, who are particularly and practically adapted, therefore, to examine into these questions, constantly find themselves opposed and thwarted in their aims in the right direction, by minds guided more by legal acumen than enlightened by the present scientific status of the questions involved.

Hence the breach is constantly widening. Hence the non-professionial observers of the contest from day to day grow more skeptical, humanity suffers and the discoveries of science are rendered less available.

We have already referred to the question of motive, but in this particular connection a few more remarks may be added in consideration of the importance of the subject.

When a son kills his father, not influenced by passion, the desire of inheritance or any other cause, a strong suspicion and presumption of insanity would exist. When a mother destroys six or seven of her children to send them to heaven, the same doubts of her sanity would suggest themselves. But, gentlemen, you must be made aware that the insane are influenced by the ordinary motives of human action equally with persons of incontestable sanity.

If you visit an asylum and strike one of the patients he will resist your violence and strike back; if your bearing be insulting it will immediately provoke resentment. In the ordinary management and discipline of institutions for the insane these facts are recognized, and the entire moral treatment thereby influenced. They are therefore punished or rewarded in a paternal manner when the necessities of their case demand such a recourse, otherwise the rules and moral treatment which form the most important factors in promoting their restoration would be without success. Hence the maxim never to be lost

sight of in dealing with the insane consists in "kindness and firmness," inasmuch as they allow themselves to be swayed by motives like other people.

Then again there are sane people the interpretation of whose motives is but too often an inexplicable mystery, and we would have to plunge very deep into the labyrinths of the human heart, into the innermost recesses of the soul, to be always successful in our efforts in this direction.

Should lunatics be hung? It seems hardly necessary in this enlightened age to discuss such a question, yet the subject occasionally is re-agitated notwithstanding its barbarous stupidity. Some claim that as lunatics are dangerous, expensive and of no possible benefit to the community, that *pro bono publico*, they should be hung as soon they perpetrate crime. The atrocious inhumanity of such a sentiment is as disgraceful as it is brutal.

The example of incarcerating the insane in asylums does not prevent others from the same fate. Example, to prevent disease, can exert no beneficial result. Forbes Winslow, commenting on this subject, claims that as well might we insist upon inflicting capital punishmeut upon epileptics because of their misfortune. But would this deter the development of epilepsy in a single individual? As regards the *plea of insanity* Lord Hale's views were extreme. He held that "there must be a defect of the understanding, unequivocal and plain."

Lord Coke held "that whoever by sickness, grief or other accident, wholly loses his memory and understanding" is *non compos mentis*.

Lord Chief Justice Mansfield, in the trial of Bellingham, charged that "the single question was whether at the time this act was committed, he possessed a sufficient degree of understanding to distinguish good from evil, right from wrong, and whether murder was a crime not only against the laws of God, but the law of his country."

Lord Erskine considers "*delusion* where there is no frenzy," to be the true character of insanity. "Viewed, however, as a principle of law, the delusion and act should be connected."

According to the 64th article of the new penal code: "Il n'y a ni crime ni délit lorque le prévenu était en état dé démence an temps de l'action."

Forbes Winslow, in commenting upon the above opinions, states: "I am disposed to express my complete concurrence in

the views of Dr. Haslam on this point, that 'it is not the province of medical writers to pronounce an opinion as to the prisoner's capability of distinguishing right from wrong. It is the duty of the medical man when called upon to give evidence in the court of law, to state whether he considers insanity to be present in any given case, not to ascertain the quantity of reason which the person imputed to be insane, may or may not possess.,"

"If it should be presented," says Dr. Haslam, "that any medical practitioner is able to penetrate into the recesses of a lunatic's mind, at the moment he committed the outrage, to view the internal play of obtruding thoughts and contending motives, and to depose that he knew the good and evil, right and wrong, he was about to commit, it must be confessed that his knowledge is beyond the circuit of our attainment. It is sufficient for the medical practitioner to know that such a person's mind is deranged and that such a state of insanity will be sufficient to account for the irregularity of his actions; and that, in a sound mind, the same conduct would be deemed criminal. If violence be inflicted by such a person during a paroxysm of rage, there is no acuteness of metaphysical investigation which can trace the succession of thought, and the impulses by which he is guided for the accomplishment of his purpose."

As regards these first opinions quoted, I doubt not, gentlemen, that you are sure, from what has been explained to you in the first part of this lecture, that the most dangerous forms of insanity are those in which neither illusions, delusions, hallucinations nor perversions of the intellect generally, are discoverable.

As regards the recognition of the difference between right and wrong it is now an indisputable fact that nearly all the insane with no difficulty make the distinction.

It is the volitional centers which are never spared in all forms of insanity. *Hence in every judicial charge the question to be determined is as to whether or not the criminal pleading insanity, whilst recognizing the difference between right and wrong, was able or unable to control his action.*

It would be as rational a procedure to punish a school boy whose antics and grimaces—the result of chorea—are a source of laughter and distraction to his schoolmates, as to inflict punishment upon the insane criminal, who, knowing the difference between right and wrong, has it not in his power to execute that

which his judgment dictates. One is under the dominant influence of "insanity of the muscles," the other under the influence of insanity of the will.

To punish one would be as cruel as to punish the other. One of the most powerful blows which can be inflicted upon the workings of the intellect is that exercised by the presence and influence of insanity, weakening and perverting and even in many cases annihilating the faculties of volition. Without the exercise of the regulative powers of volition, mental convulsion, discordant, incoördinated and automatic actions are inevitable; blind, instinctive and irresponsible conduct results. No moral responsibility, therefore, can exist where insanity subverts the all directing and controlling power of the will whereby resistance is rendered impossible.

Insanity as an extenuating plea in cases of murder requires that the previous condition of the individual's life should be investigated.

Winslow declares "it is necessary to inquire whether the person has at any previous period of his life manifested any signs of mental derangement; if such be the fact, it ought to constitute a prima facie case in his favor."

Isolated facts, when introduced in support of the plea, with no exceptions, in my opinion, nothwithstanding the weight of the distinguished authority just quoted, should be valueless, unless the insanity can be established by a *concurrence* of facts indisputable and conclusive, resting upon the broad principles of medical diagnosis. Upon this point I cannot too strongly insist. In order to facilitate the interpretation of cases in which the plea of emotional insanity is made, Dr. Pritchard lays down the following rules. They are based upon the conjoint observations of Esquirol and himself.

1. "Acts of homicide, perpetrated or attempted by insane persons, have generally been preceded by other striking peculiarities of action, noted in the conduct of these individuals; often by a total change of character.

2. "The same individuals have been discovered in many instances to have attempted suicide, to have expressed a wish for death; sometimes they have begged to be executed as criminals."

3. "These acts are without motive; they are in opposition to the known influences of all human motives. A man murders

his wife and children, known to have been tenderly attached to them; a mother destroys her infant.

4. "The subsequent conduct of the unfortunate individual is generally characteristic of his state. He seeks no escape or flight, delivers himself up to justice, acknowledges the crime laid to his charge, describes the state of mind which led to its perpetration; or he remains stupefied and overcome by a horrible consciousness of having been the agent in an atrocious deed."

5. "The murderer generally has accomplices in vice and crime; there are assignable inducements which led to the commission, motives of self-interest, revenge, displaying wickedness premeditated. In some instances, the acts of the madman are premeditated, but his premeditation is peculiar and characteristic. There is also a presumption of insanity where the individual has either been previously insane or affected by epilepsy."

It is therefore self-evident, gentlemen, from all that has been said, that while insanity in general is "a reasoning unreason," yet in the emotional or affective form of that disease, we are to ignore the particular morbid manifestations of thought as expressed in words, and confine ourselves to the study of the actions, which portray a disordered condition of feeling. The plea of emotional insanity, we have ascertained, so far from being one of a trivial nature, and easily maintained, as popular prejudice might induce you to believe, is of an intricate and complicated character, requiring for its establishment a most thorough knowledge of the philosophy of the general subject of insanity, and no ordinary powers of observation and analysis. In addition to this, the physician investigating the phenomena of emotional insanity should possess earnestness, perfect candor and an unbiased mind. Leaning in one direction or another, redounds to the discredit of science and the still further degradation of a well founded plea, which, when resting upon the basis of a careful diagnosis, is sound in theory as well as practice and of great service in a philanthropic point of view. When abused, as is too often the case, the plea can only result in the perversion of justice and professional disgrace, the infliction reaching not only the individual but society at large.

Original Contributions.

Article XXIX.

Post Partum Hemorrhage. By Joseph Workman, M. D., of Toronto, Canada.

I have read, with much interest, in the February number of The Journal, the report of Dr. Maughs' paper on post partum hemorrhage, and of the discussion in the Medical Society to which the reading of it gave rise; and as the subject is one of very high importance, and has for nearly half a century engaged my especial attention, I venture to ask of you a little space in your columns, for a few observations, which I trust may not be unworthy of the polite consideration of your readers.

I am aware that the efficacy of injections of various fluids, in the restraining of this formidable hemorrhage has of late years been highly extolled, and I question not that the gentlemen who have given trial to this method of treatment, have realized the excellent results which they have recorded; at the same time it is not denied that unpleasant, or even perilous, consequences have occasionally ensued, and it is the more to be regretted that these have most largely been provoked by that form of injection, (solution of per sulphate of iron),- which is probably the most potent of all the remedies which have been accredited as suppressors of uterine hemorrhage. Having myself, for the simple reason of never having employed the per sulphate injection, had no experience of either its merits or its demerits, I venture to offer no opinion on its therapeutic agency. Its efficiency may, or may not be, the result of blood coagulation within the uterus, and extending into, and sealing up, the denuded uterine sinuses, though I should regard this *modus operandi* as a rather unpropitious process, and therefore not so desirable or safe as any other method which may ensure arrest of hemorrhage by perfect and persistent construction of the uterine fibres. We know that in

ordinary cases of safe labor, this is nature's course of action in preservation of maternal life, and in every department of medicine the nearer we can approach to her line of action, the better for the fortunes of our patients, and for our own reputation. If we arrest uterine hemorrhage, not by physiological constriction, and closure of the gaping sinuses, but by corking these up, with induced, firm, adherent blood clots, saturated with a hardly innocuous mineral solution, we may have done something more, and a little less, than should have been our simple purpose. These clots are undesirable foreign bodies, of which nature must struggle to relieve herself, as best she may; until she has effected this riddance, our patients cannot be said to be clear of danger.

In a paper which I had the honor of reading before the Canada Medical Association, at the annual meeting of 1877, in Montreal, I drew attention to "*the use of acetate of lead in large doses, in post partum and other hemorrhages,*" and I was gratified to find that my views in relation to the safety and efficiency of this plan, were amply corrorborated by several of the most experienced members in attendance. I am also able to state that from every one of my old pupils, who attended my lectures in the Toronto School of Medicine, over five and twenty years ago, I have invariably received the most unhesitating confirmations of the supreme value of acetate of lead in *large* doses, in the control, not only of uterine hemorrhages, but of some other forms, and not in a single instance have I ever learned of any unpleasant, much less of any dangerous consequences.

In my days of student life, we were all taught that acetate of lead was, in large doses, an "*irritant poison.*" It is so designated in the "Dispensatory of the United States," sixth edition, 1845. Christison, in 1844, treating of this substance, says that, "though certainly an irritant poison, it is not very energetic," and that he has "often given it in divided doses to the amount of eighteen grains daily, without remarking any unpleasant symptoms whatever, except once or twice slight colic."

I am not at all surprised to learn that symptoms of colic followed the exhibition of the acetate *in divided doses*, to the amount of "eighteen grains in twenty-four hours," for I never but once saw any unpleasant results from this remedy, and that one was a case in which, in consultation, I failed to induce my professional friend to venture beyond five grain doses, and then

only in form of pill, combined with opium, to both of which methods I objected. In that case I saw for the first time in the field of my observance, the genuine *lead gum*, and I believe slight colicky symptoms were presented. My usual dose in post partum hemorrhage was one dram, dissolved in half a tumbler of water, of which I first gave half, and if this provoked speedy uterine contraction I gave no more; but if it did not I never hesitated to go farther. I took care only to use fresh samples, though even if some carbonate chanced to be present, this being insoluble, would soon fall to the bottom of the glass. I never added acetic acid; first, because it is unnecessary when we give the pure solution; secondly, because I believed chemical transformation is more likely to be facilitated than retarded or prevented by this addition. I never conjointly, or in alternation, gave opium, because I believed that the more speedily the salt was voided from the body the less likelihood of chemical change, and I often observed that large doses induced early alvine evacuations.

The promptitude with which large doses excite uterine contraction has often surprised me; and this fact has been most noticeable when instant vomiting (which however is not a general occurrence), has been provoked.

Some of my old pupils have told me they have given it in double, or even in treble the doses taught by me, and always with good, never bad results.

In profuse hæmoptysis, I have, within twenty-four or forty-eight hours, administered four, six or even eight drams, without the slightest injury, and with signal hæmostatic success Finally I venture to say that pure acetate of lead, in *large* doses, is the surest and safest of all our medicinal incitants of post partum uterine contraction.

Reports on the Recent Progress of Medicine.

ARTICLE XXX.

SURGERY (FROM THE GERMAN.)

BY F. J. LUTZ, M. D.

EXPERIMENTAL AND ANATOMICAL INVESTIGATIONS CONCERNING ERYSIPELAS—THE ETIOLOGY OF ACUTE INFLAMMATIONS—INJURY OF THE RIGHT FRONTAL LOBE OF THE CEREBRUM—APHASIA—DEATH—OBLITERATION OF VARICOSE VEINS.

Among the many valuable papers read before the Seventh Congress of the German Society of Surgeons, which met at Berlin, April 10–13th, 1878, an essay by H. Tillmanns, entitled "Experimental and Anatomical Investigations Concerning Erysipelas," is especially interesting. Although erysipelas is said to have occurred "at all times and in all regions of the earth's surface," there are, nevertheless, in spite of the most extensive literature on this subject, many mooted questions connected with it, and of these none is of greater importance than that of its contagiousness.

It is well known that opinions concerning this point vary widely. English physicians have, since the time of Graves, declared their belief in it, and in this country, whatever may be the theoretical conviction of surgeons in practice, it has, so far at least as we have been able to learn, been looked upon and treated as a contagious disease. In France the theory of its contagiousness is continually gaining new advocates, whereas in Germany it has generally been denied or considered contagious only in exceptional cases.

In his experiments Tillmanns first investigated the possibility of transmitting erysipelas from a patient to a healthy person by inoculation; whether the lymph, pus, the serous fluid of the vesicles and the blood produce a specific, i. e., contagious effect.

Should this be the case, the contagious nature of the disease would be established. To determine this question Tillmanns made 25 experiments with squirrels and dogs. Recent or granulating wounds of the skin and mucous membrane were infected, the experimenter using all the precautions necessary. The infecting material consisted of the œdematous fluid from the portions of the skin affected, the contents of the vesicles, liquid and dried, blood and pus. Of the 25 inoculations 5 were successful, a sufficient number the author thinks to establish the contagiousness of the disease.

Of the five successful cases three were inoculations from man to the animal, and two from one animal to another. He thinks it probable that were inoculations made from man to man positive results would more frequently be obtained.

In one of the experiments (7th) a young dog about ten weeks old was inoculated by a subcutaneous injection. No local disturbance was produced, but symptoms indicative of a general intoxication (fever, diarrhœa) and an abscess at a distant site appeared, which goes to show that poison does not always infect the organism at the site of its entrance, but may after the lapse of considerable time evince itself at some remote place. This was corroborated by Dr. Lange, who related, in the discussion which followed the reading of Tillmanns' paper, that he had suffered nine times with erysipelas in the left half of the body. The disease had been brought about by small punctures made by a needle used in preparing specimens for the microscope. It never appeared first at the site of infection, but at the elbow or in the upper arm and thence spread equally in all directions.

This observation also speaks very strongly against what some authors have termed "spontaneous" erysipelas, which is said to occur especially in the face. Superficial lacerations of the adjacent mucous membranes may be considered the starting point of the disease; but it is not necessary, according to the observation just mentioned, to suppose a primary erysipelas of the mucous membrane, upon which the facial erysipelas followed.

Some light may also be thrown by this view upon deep-seated inflammations, such as osteo-myelitis, which may have their origin in cutaneous infection.

Concerning the period of incubation and the way in which the erysipelas began, it was observed in three cases (5, 10 and 17) that the local and general infection occurred simultaneously.

A 2 to 4 per cent solution of carbolic acid completely destroyed the efficacy of the erysipelatous poison.

According to Kocher, who contributes an article on the etiology of acute inflammations, the same causes which produce traumatic inflammations are also the excitors of acute inflammations in deep seated-organs. Minute corpuscular elements, which are introduced into the wounds from without, are, as antiseptic surgery has demonstrated, the cause of inflammatory action and not the injury the part has sustained. The difference between a simple, local acute inflammation and the most acute pyæmia is one of degree only.

His deductions from quite a number of observations and experiments are, that acute strumitis as well as acute osteo-myelitis, and perhaps every acute inflammation of deep-seated organs, is an infectious disease, produced by the same factors which cause putrefaction on the surface of the body.

The infecting material may enter the system through the alimentary canal, in some cases through the respiratory tract, the mucous membrane of the uterus, or through any of the primæ, viæ, as also through small abrasions of the cutaneous surface; nor does it always produce an inflammation at its site of entrance. This latter fact is also proved, as will be remembered, by the experiments of Tillmanns' detailed above.

The most probable supposition is that the infecting particles are micro-organisms (cocco-bacteria septica.)

In the *Centralblatt feur Nevenheilkunde*, Wernher reports a case of injury to the right frontal lobe of the cerebrum, which is worthy of record from the fact that it demonstrates the existence in man of centers of motion, for certain groups of muscles in the surface of the anterior lobe of the cerebrum, arranged in the same manner and in like numbers as they have been shown to exist in the dog, and also because only in rare instances has abrasion followed lesions of the right hemisphere.

The patient, æt. twenty-two, was struck on the right side of the head with a heavy, sharp stone. He had fallen to the ground, but was stunned for a moment only; he soon recovered consciousness and was able to walk the greater part of the way to the hospital and ascend the stairs unassisted. On examination a wound two and a-half inches long, extending from the wing of the sphenoid to the frontal bone and a fissure one-half inch in width were found. A circular piece one inch and a-half

in diameter was separated from the inner table of the skull and depressed. Pulsation of the brain could not be recognized. The fracture involved the region of the middle meningeal artery and the fossa of Sylvius, which explains the hemorrhage at the beginning. No sensory or motor disturbances; temperature and pulse normal; patient declines operative interference; simple dressing and ice applied.

After two days the patient became aphasic and peculiar convulsive phenomena appeared, which were always limited to certain sets of muscles. They were first observed on the left side and afterwards most frequently on the right side. The convulsions appeared most frequently in those muscles of the face and neck which are supplied by the facial nerve. Voice clear and sonorous, twitching, unilateral movements of the platysma were also observed. Spasmodic movements of the extensors and flexors of the fingers; fronators, supinators and the flexors of the carpus were not involved. Similar movements were observed in the leg; the elbow was not involved, nor the muscles of the upper arm or thigh.

Next morning the patient was speechless; pulse, 130; temperature, 39° C. The convulsions were very vehement during the night. After a few hours they ceased; the limbs seemed paralyzed; no reaction. The depressed bone was now removed because of the supposed incipient inflammation of the brain. The operation did not relieve the functional disturbances, nor was any change produced by venesection. Four days after the injury the patient died. Temperature 41.5° C.; hypostasis of the lung.

Post mortem: Under a thin layer of pus, the dura mater was covered on both sides by a hemorrhagic exudation; no perforation; several scattered layers of pus in the arachnoid; brain hyperæmic and superficially softened; on the margins of the gyri, especially of the middle gyrus bordering on the fossa of Sylvius; some apoplectic suggillations; brain œdematous; meningeal artery torn in its sulcus; diastasis of the coronary suture.

M. Dovat describes again in the *Bulletin de la Societie de Chirurgie* the method employed by him for obtaining the permanent occlusion of varicose veins, and supports it with the record of seventy-three cases thus treated, with one death. He ascribes the

death in the fatal case to unnecessary and accidental puncture of the vein.

The method is as follows: The point of a pin or needle is entered vertically through the skin close to the side of the vein, carried beneath it and brought out through the opposite side of the vein at a point corresponding to that at which it entered. The pin is then raised so as to allow a second pin to be passed at right angles to and beneath the center of the first, perforating the vein at four points. The operation is completed by placing a figure of eight suture rather tightly about the projecting ends of the pins. The pins should be removed after the fourth and before the seventh day. M. Dovat prefers steel needles one inch long, and one millimetre thick, flattened and slightly curved at the points.

L. A. S. (L. A. Sayre?) has employed this method in one case, with good result, obtaining complete obliteration of the internal saphena vein in five days, without suppuration or the loss of a drop of blood, and with no more inconvenience to the patient than the slight pain of the puncture and the necessity of remaining in bed for a week.—*Archives of Medicine.*

DISEASES OF THE NERVOUS SYSTEM.

By C. H. Hughes, M. D.

1. Metallo-Therapy—Metalloscopy—Neuro-Psychic Therapy.
2. The Microscope in the Diagnosis of the Neuropathic Diathesis.
3. Backward Progress in Psychiatry.
4. The Sweat Nerves.
5. The Tendon Reflex Phenomenon.
6. Cerebral Thermometry—Thermometric Localization of Intra-Cranial Disease.

1. The subject of metallo therapy is just now occupying the attention of European therapeutists, reviving the remembrance of Perkins and his metallic tractors in this country, and the first writings and experiments of M. Burq, twenty-five years ago in Europe, revealing also the wonders of Braidison, mesmerism and the waning memory of Gen. Pleasanton and the

fading wonders of his miraculous blue light. It will be remembered how some years ago the wondrous cures performed by Perkins ceased when it was disclosed that a pair of wooden compasses in the hands of a medical neighbor showed equally wonderful results. Nevertheless the *London Lancet* thinks "the subject is worthy of attention, and the results of recent experiments in trustworthy hands, are of sufficient significance to elicit the consideration of the profession."

We think so too. A vast field in the domain of therapeutical experimentation remains as yet but imperfectly explored; That of pure neuro-psychic therapy, which, if we may be pardoned for one philological temerity, we consider a better term than metallo-therapy, for it may be used to signify the remedial effects of all peripheral impressions, producing perceptible local chemical or physiological change, and this term embraces all that has been recently done by what is called metalloscopy and possibly by metallo-therapy (though in regard to the latter we suspend our convictions for the present), as well as the remedial effect, from time immemorial, of expectant attention, exaltation of hope and confidence, the laying on of hands, thermal friction, local cold heat and the potent influence of magnetism which have fallen into the disuse through the disreputable practices of Messmer.

From the periscope of the *Philadelphia Medical and Surgical Reporter*, of Dec. 21, 1878, we give a condensed synopsis of later experiments in this direction by distinguished men in Europe.

Eulenberg, repeating Reynard's experiment with the electric plates and galvanometer applied to the skin, came to the following conclusions:

a. The same plates applied to various healthy individuals on the same parts of the skin and under similar conditions appear to be more active in some cases than in others, sometimes having almost no effect.

b. The galvanometric intensity of the metals is by no means alike in all healthy individuals; zinc, more effective than gold in some persons, is less so in others, and *vice versa*, the proportions even vary at times in the same individuals (owing, perhaps to the dampness of the skin).

Westphal, almost simultaneously with Eulenberg, after making himself personally acquainted with Charcot's experiments and selecting like cases (effeminate, hysterical, hemi-anæsthetic indi-

viduals), began by using silver coins and found, as Charcot did, that sensibility returned sometimes locally, at others in the entire side. Sometimes he found, corresponding with the increased sensibility of the anæsthetic spot, opposite and symmetrical anæsthesia. Iron, magnetic stone, varnished copper, sealing wax and bone markers produced similar but weaker results.

M. Thermes ascertained in the cases of two hysterical patients that thermal agents are capable of acting in the same way, ice in one case and hot water in the other causing the hemi-anæsthesia and contraction to disappear.

Dr. J. Hughes Bennett, (*Brit. Med. and Surg. Jour.*, for Oct., 1878,) made a large number of experiments in cases of hemi-anæsthesia and pointed out to several who were present some of the facts here described and that the phenomena following external applications to the anæsthetic skin are perfectly genuine, and the manner in which the experiments were performed certainly give little opportunity for voluntary deception or partiality of theory on the part of the observer. So far as his experience went the phenomena were not due to any special metallic action, as the application of wood was followed by all the results attributed to the metals. So far as he could judge the changes were due to the effect of expectant attention and the result of the manipulations, acting on the body through the mind. This is in accord with known facts.

We now come to some recent observations of our own in this direction.

Case I.—Mrs. C——, æt. 53 years, the mother of several grown sons and one daughter; of an excitable nervous temperament, her equanimity being so greatly disturbed, when any of the family are sick, that she scarcely knows what "she is about;" came under treatment for slight chorea of the right orbicularis palpebrarum muscle last summer, but recovered under use of Fowler's solution and galvanism; came again in December complaining of loss of feeling in the left hand, arm, foot, and leg. The moist sponge electrodes connected with the battery but with disconnected current, were applied twelve different times, with gradual and finally by complete disappearance of all anæsthesia.

Case II.— Miss Beck, aged 20, daughter of the above, has had repeated hysterical attacks. She sometimes falls down un-

conscious and has a tumultuous heart at times; lately "paralyzed (?) in her left arm, so that she could not feel anything.

An application of sulphuric ether to the back of the head and upper dorsal region made a profound impression, peripheral and central, and cured her paralysis, she said. We applied no anæsthesiometric tests.

Mr. C, æt. 19, brother and son of the above, became suddenly affected in the spine with tenderness over the sixth dorsal. He "come to have it cured in time," he said. An etherial lotion caused it to soon disappear. The father of this young lady and young man is very delirious and flighty whenever he has slight fever.

A very clear description of what is called metallo-therapy may be found in an interesting article by Dr. H. Gradle in the Oct., 1878, No. of the *Chicago Jour. of Ment. and Nerv. Diseases.* The writer says: "Each patient is said to be sensitive to *only one* metal, rarely more, and hence the first step must be to discover the idiosyncrasy of the patient. Mr. Burq gives the following list as the scale of frequency of influence of the different metals: iron, copper, zinc, gold, silver, tin, rarely platinum, and probably arsenic and antimony. Metallic discs of the size of large coins or wooden discs coated with the metal are employed. In one to fifteen minutes objective changes can be seen. The anæsthetic skin, formerly cold, pale and almost bloodless when pricked, now becomes reddened, warmer and even hyperæmic. The patient, formerly insensible to deep pricks, will now show sensability to a mere touch of the pin. At the same time the special senses return to their normal activity and the dynamometer indicates now a full strength of the formerly infeebled muscles. Where a contraction exists it usually disappears.

But on the other, formerly normal side of the body, a peculiar change can now be found. Exactly what one side has gained the other has lost. When the anæsthesia disappears only in the vicinity of the metallic discs, the symmetrical spot in the previously normal sides of the body loses it sensibility to the same extent, while in some cases in which the metallic application removes the existing anæsthesia completely there still remains a hemi-anæsthesia, it being only transferred to the other side. * * The original anæsthesia disappears at first at the point of metallic contact. If the discs are now removed, the return of sensibility continues and finally the original

anæsthesia disappears completely. At the same time the loss of sensibility of the other side follows the identical course. The pneumonia lasts rarely longer than one day in any hysterical case, when everything returns to its former condition. If, however, the metal is left in place continually * * * the returned sensibility, instead of continuing to spread, suddenly disappears again, a corresponding change taking place also on the other side. Both sides have returned to their orignal condition, while the metal is still applied. * * * This state Mr. Burq calls the return anæsthesia. It is called by Charcot a *test for the hysterical diathesis.* If in a hysterical patient all manifestations of the disease have disappeared in the course of some treatment, the application of the metal to which she was sensitive previously, causes no change whatever in the case of a perfect cure. If, however, the hysterical diathesis still exists, though latent, the metalloscopic application gives rise to a feeling of numbness, *malaise* and drowsiness, often causing sleep, while the sensibility disappears completely at the place of application. This is Burq's experience.

"The claims which M. Burq asserts for internal metallo therpy are even more marvellous. That metal which previous metalloscopic attempts have shown to possess an influence when applied extensively, is given to the patient internally in ordinary form and dose, with the result, he claims, of a perfect cure of hysterical symptoms and diathesis. As a test for the complete cure he reapplies the metallic disc; if no return anæsthesia follows, the disease is eradicated. Charcot, while occupying a perfectly neutral standpoint, gives Burq the credit of having ameliorated the condition of four cases of hystero epilepsy, all of which he had known for years as unmanageable by any treatment. * * * Another case of long-standing hysteria completely cured by Burq, by the internal use of silver, according to the metalloscopic indications, is reported by V. Revilliot, (*Gaz. du Hosp.* July, 1878,' and others have since been published.

"Results like these," Dr. Gradle also says, "vouched for by responsible parties, render further investigation a duty."

Alluding to the propensity which hysterical patients have for simulation and deceit, Dr. Gradle also says: "Perhaps one of the best guards against deception on the part of patients, is the announcement of results in hysterical amblyopia, the details of which the patients could not possibly know beforehand.

The extreme periphery of the healthy retina cannot perceive all colors with ordinary illumination. The field of vision, larger for the perception of light in general, than for any one color, is not the same for the different colors. Violet can be perceived only by the more central parts of the retina; green has a larger field of vision; next in order are red, orange and yellow, while blue is still perceived by the most peripheral zone. * * * This normal condition is exaggerated in hysterical amblyopia. Besides the reduced visiual acuity we find in this trouble a characteristic limitation of the field of vision for light in general and still more so for colors. * * * On applying a disc of active metal to the temple of such a patient, the observer can follow step by step the increase of visual acuity and the gradual peripheral extension of the color peceiving zones. * * * The positiveness and unanimity with which different patients pronounce upon the order of appearance and disappearance of the colors, precludes all suspicion of deception."

Metalloscopy and metallo-therapy present us with some new facts, though the explanation of them is to a great extent old and consists in nerve mental impression. This would seem to be the true explanation in many cases at least, from the fact that when the patients recover the remedies no longer affect them. They no longer expect nor desire to be impressed by the applied metals and from a fact observed by us in one instance, that the surface changes did not occur in the application of the metals during sleep. But there may be some things unexplainable upon the theory of expectant attention.

That the latter may and does explain much, as Dr. A. De Wattville, in *Brain* for Jan., says "is a proposition which will not be denied, but that it explains all, requires more conclusive argument."

"It is a curious fact," says Dr. De Wattville further, "that the application of discs, metallic or wooden, should have such a marked influence upon the imagination of the patient. It would seem that the more striking application of electricity from an induction coil, for instance, ought to enlist as much interest on her part and act as powerfully upon her psychical faculties. In Salpetriere, the patients, inured as they are to the most varied experiments, yet find the simple application of metal plates successful.

Again, however, imaginative hysterical patients may be,

we find that in them the effects are but transient, while in old standing organic lesions, permanent cures are effected. * * * Entirely unexpected success can hardly be put to the credit of expectant attention. * * * "Under given circumstances the nervous system may become more sensitive to electrical influences, as it does to light, sound, etc. * * * * * * * *

"Many people of nervous temperament are highly sensitive to changes of atmospheric potentials. Lombard has shown that mortality and electrical tension rise and fall together. Prof. Scutetten has given reasons for assuming that mineral waters owe their efficacy more to their electrical action than actual composition.

That terrestrial magnetism may have an influence on our bodies is far from improbable, and Dr. Horn has tried to establish some connection between certain diseases and magnetic fluctuations.

Grandeau and Bertholet have found that plants can be arrested in their growth by disposing about them a few iron wires." Dr. De Wattville sums up by saying, "Under certain disturbed conditions the nervous system appears to be sensitive to influences, various in their nature and obscure in their mode of action. The facts are too numerous and too well supported to be doubted; the explanations of the facts hitherto given are not sufficiently supported by experiment to be regarded as satisfactory. Whatever the fate of metallic and magnetic therapy may be, there is not the slightest doubt that the researches to which they have given origin will be followed by a rich harvest of pathological discovery in a very important and obscure field of medicine," and he ascribes "all honor" to Charcot for having the courage to bear the charge of reviving played out and flimsy superstitions."

Explanations of these phenomena are still in order, and will doubtless be forthcoming.

In addition to those already alluded to Adamkiewicz finds an all sufficient explanation in mechanical irritation, because a mustard plaster and pressure developed the same results.

Possibly some of the cases may be explained upon another supposition, namely, that of hemi-somnolency of the centrum commune which is aroused to normal activity by the operator.

2. In the initial number of the *Archives of Medicine*, ap-

pears an article by Dr. C. Heitzman, interesting from the novelties if not on account of the scientific varieties of its statements, though the author, with the characteristic enthusiasm of microscopists, doubtless believes in their truth and thinks the facts he has laid before the profession may convince even the most skeptical.

We do not give what here follows as indubitably attested progress, though we can not ignore it in a report on progress simply because we are incredulous. We may premise, however, that if what Dr. Heitzman asserts is diagnostically true, we have certainly reached an age of progress in medicine which calls for the pen of a Maunchausen to record its achievements.

Such microscopists are nothing if not startling. Such as they, found the specific cancer cell and the mythical vibrio of venereal. Where are they now? We remember them only as sells. And the spore of malaria, the germ of yellow fever and the neuropathic diathesis now come up at the bidding of these far-seeing *visionaires* and like Banquo's ghost will not down.

We like the microscopists and could not do without them, but an atmosphere of credulity and enthusiam surrounds them all. They delve in the domain of the mysterious and sublime and some of them inhale too much credulity. A kind of scientific superstition sometimes possesses them unawares, no less reprehensible than the superstition of ignorance.

The following appertains alone to our department. The whole of Dr. Heitzman's paper, however, will be found interesting reading: "Last season a young physician asked me whether I believed in the marriage among kindred? He fell in love with his cousin, and so did the cousin with him. I examined his blood, and told him that he is a "nervous" man, passes sleepless nights, and has a moderately good constitution. The condition being suspected in the kindred lady, marriage was not advisable for fear that the offspring might degenerate. So great was his faith in my assertions, that he gave up the idea of marrying his cousin; offering her the last chance, viz., the examination of her blood. This beautiful girl came to my laboratory, and, very much to my surprise, I found upon examination of her blood a first-class constitution. The next day I told the gentleman, "You had better marry her." (pp. 65 and 66.) Dr. Heitzman claims that has he arrived at a point of perfection,

which allows him to tell the constitution of a person without knowing anything of his former life. (p. 64.)

Dr. Heitzman says many good and true things in regard to the value of the microscope in diagnosis, but claims too much progress.

3. Dr. George H. Savage has recently declared ("Guy's Hosp. Reports," third series, vol. xxiii, 1878, p. 161) that, "the mere producing of sleep does little if any good in the majority of cases of insanity," and he relies chiefly (page 164) on moral treatment by means of the right mental levers," whatever those implements may be. Few authorities, probably, will concur in this view. Dr. Bucknill, for instance (page 734), says, "It is, and must be, a great point gained that a patient suffering from acute mania should have a good night's sleep secured for him." Dr. Blandford, again (page 230) speaking of acute delirious mania, says, "But many of these cases are cut short and cured like delirium tremens if we can procure one long and sound sleep.

He has contributed articles to the *Dublin Med. Press* and *Canada Med. Record*, for December, on the treatment of insanity by drugs, in which the above statement is reiterated. Dr. S. says some good things, though they are not new, in regard to camphor and chloral in combination, for the erotic and lascivious insane, etc., and does not think much of conium, but we venture to challenge him to cite a single case of acute mania where the quieting influence of hypnotics on the brain was not beneficial in the conservation of the brain force and the prolongation of life, at least.

"Acute mania, in particular, accompanied by violent delirium, continual agitation and prolonged wakefulnes, requires an energetic medical treatment. In these cases, sedatives are of great use. Chloral and bromide of potassium, when employed at the commencement of the disease, have a marked effect; they modify and preceptibly diminish the violence of the symptoms. They bring on a refreshing sleep and soothe to a considerable degree the excitement of the first stage of the malady."

This quotation, taken from a late report of Drs. Landry and Roy, of Beuport Asylum, Quebec, now on our table, gives the experience of the most eminent alienists, among whom Drs. Landry and Roy are not least.

4.' The columns of this journal have contained nothing during the past twelve months or more on the sweating process and the nerves concerned in this function, and a report would be incomplete without some note of what has been done in this direction. We give its readers, therefore, without comment, an excellent condensation of the monograph of Adamkiewicz, by H. G., in the *Jour. of Mental and Nervous Diseases*, for July, 1878:

"Proceeding from the common experience that muscular movements are followed by sweating, he galvanized various motor nerves in man. As a result sweat drops appeared at once on the coresponding portion of the skin, and continued to be formed for a short time after interrupting the stimulation. The sweating region is the portion of the skin over the contracting muscles, but this is always accompanied by sweating of the symmetrical spot on the other side of the body. The perspiration is independent of the circulation, as it occurs equally intensely, and just as soon after compression of the main artery, for instance, the femoral. It can be induced as well by direct galvanization of the muscles as by their *voluntary* contraction. It must be mentioned, however, that Adamkiewicz selected as subjects persons with a disposition to sweat.

To obtain a reflex perspiration he made use of the faradic brush. Its application is speedily followed by sweating of the irritated spot and its mate on the other side. In persons predisposed to sweating, the perspiration, however, is induced soon in all those parts which sweat most readily, normally, such as the palms and soles. This result he expresses in the law, "that the secretion of sweat occurs in man always symmetrically on both sides, and independently of the place of stimulation." The same law holds good when thermic stimulation is resorted to. The contact of a substance some 6–8° C. warmer than the body produces bilateral sweating on those spots most liable to perspiration, such as the soles of the feet, even when the warm body is applied in another locality. A cold substance, on the other hand, will not induce, but rather check, perspiration. Cold, however, is a powerful stimulus to unstriated muscles, and the contraction of the fibres surrounding the sweat glands can force out their contents.

As regards the sweat centers in the cord, Adamkiewicz found that perspiration of the hind paws can continue after division of the spinal cord at the level of the first lumbar vertebra. Re-

moval of the lumbar cord, however, prohibits all further spontaneous sweating of the hind paws. After section of the cord at the level of the first lumbar vertebra stimulation of the central end of the divided sciatic nerve causes a reflex sweating of the other leg. On shortening the lumbar cord by successive slices, it was found that the spinal centers of the sweat nerves of the hind paws are situated in the portion between the first and fourth lumbar vertebræ. This coincides with the centers of the motor nerves of the leg; similarly it was found that the centers of sweat nerves and of the motor nerves of the anterior extremity coincided in their position. The sweat nerves leave the cord with the anterior roots, since reflex perspiration can still be obtained after division of all posterior roots of the lumbar fragment. Histologically we are to infer that the sweat centers exist in the anterior cornua. This supposition was confirmed by a case of poliomyelitis anterior acuta, in which the motor paresis was accompanied by paralysis of the sweat nerves.

After removal of the lumbar fragment of the cord, stimulation of the brachial plexus will still produce sweating of the hind paws. This is due to the influence of fibres joining the sciatic nerve, and coming from the sympathetic. The origin is found in that portion of the cord included between the tenth and thirteenth dorsal vertebræ (of the cat).

Finally, it was shown that the common center of all sweat nerves exists in the medulla oblongata."

5. Since Erb and Westphal called attention to the phenomenon of muscular contraction on tendinous percussion, and its absence in the tendon of the quadriceps extensor femoris in gray degeneration of the posterior columns of the cord, some observations have been made, tending to make the value of this sign somewhat more restrictive than they have claimed for it.

Gowers in England, Hamilton, Bannister, Jewell, and myself in this country have observed that it is not an invariable sign.

Dr. Allan McLane Hamilton, of New York, (*Brit. Med. and Surg. Jour.*, Dec. 1878,) reports four cases of tabes dorsalis, in which tendinous reflexion at the knee was present.

Drs. Jewell and Bannister's cases are referred to in the Oct. 1878, No. of the *Jour. of Mental and Nervous Diseases*, and my own in the Feb. No. of the St. Louis Med. and Surg. Journal.

Dr. Bannister found the phenomenon absent in two healthy persons and we have seen lately several similar cases. The following are the conclusions of Dr. Allan McLane Hamilton's paper:

"As to the pathological condition which explains the occurrence of the tendon-reflex in some cases, and its absence in others, we must necessarily be very much in the dark. Such variations must depend, of course, upon the location of the affected regions of the posterior columns. It is quite possible that one of the three kinds of fibres described by Clarke is affected while the others remain intact, and from the fact attested by most observers, that the *funiculi cunicati* are primarily attacked, it seems reasonable to suppose that the horizontal fibres, which probably eventually end in the gray matter of the posterior horns, are those impaired in cases in which the "tendon-reflex" has been extinguished. Pierret has made autopsies in patients who died before the disease had advanced far into the first stage, and his investigations prove that the external portion of the posterior columns are primarily affected, and not the columns of Goll. The exemption of these parts, or the affection of the extreme posterior portion of the lateral columns, might account for the presence of a normal or even an exaggerated tendon reflex, but we cannot say, with all the clinical features, that the disease has not been locomotor ataxia in the various exceptional cases brought forward, and these are certainly goodly in number."

6. Since the memorable experiments of M. Paul Broca, in 1877, on this interesting subject, revealing a difference of temperature in the two hemispheres of the cerebrum in repose and other thermometric facts now quite well known to all neurologists, no one has done more in our own country in confirmation of the statements of M. Broca or made more advance in the direction of cerebral thermometry, than Dr. Landon Carter Gray, of New York, whose interesting researches are published in the (*Jour. of Ment. and Nerv. Dis.* Jan. 1879).

By means of thermometric observation Dr. Gray predicted as follows concerning a patient sent him by Dr. Frank W. Rockwell: "I shall certainly expect to see inflammatory changes from the base of the fissure of Sylvius backward along the occipital lobe, as well as that these changes shall be spread around

the base of the fissure." After the death of the patient, "a soft jelly like tumor the size of a hazel nut was found between the horizontal or posterior branch of the fissure of Sylvius and the first temporal fissure, while the whole of the right occipital lobe was converted into a colloid, extremely vascular mass, which gave way under examination; this degeneration also extending anteriorly to the tumor as far as the fissure of Sylvius. There was no apparent disease except at these points."

This, Dr. Gray believes, "is the first case on record in which a diagnosis of the locality of an intra-cranial morbid growth has been made with a thermometer and afterwards verified by a *post mortem examination*."

Translations from the German.

PATHOLOGY AND THERAPEUTICS IN OPHTHALMOLOGY. [Taken from Prof. A. Nagel's *Jahresbericht euber die Fortschritte und Leistungen im Gebiete der Ophthalmologie.*] By S. POLLAK, M. D., Surgeon to the Eye and Ear Infirmary of the St. Louis Hospital.

GOOD EFFECT OF TENT LIFE IN PURULENT OPHTHALMIA.—PARISOT, (Des bons effets du sejour sous la tente et du barraquement contre une epedemic trés grave d' ophthalmics purulentes. Gaz. des Hop.), describes a highly malignant epidemic of blenorrhœa, which broke out in the Hospital St. Stanislas, of Nancy, among the orphans and foundlings, in 1872. First it attacked the nurselings, which had been put out to nurse, and which were brought back to the hospital in such numbers as the surrender of the territorial district to Germany rendered it neccessary. These were at once segregated. The number in the hospital rose suddenly from 149 to 352, twenty-five of which sickened immediately; of these one lost both eyes, and two one each. After being transferred to other houses, no other case occurred in six weeks; but the epidemic broke out anew on their return to the Hospital St. Stanislas. At last, all the sick, eighty-three, were

placed in a tented camp, in a meadow, between trees. The tents were furnished by the war department, and made of the best stout sail cloth. Each tent contained four small beds. The favorable effect of this open air sojourn was manifested at once, without special treatment, except cleanliness, cold water fomentation and good diet. Prior to that, astringents, nitrate of silver were used, which rather increased the inflammation. They remained in camp from August to November. Every trace of ophthalmia had disappeared, and never returned again.

CASES OF OPHTHALMIC DISEASE IN WHICH ENFORCED EXPOSURE OF THE EYE TO LIGHT AND AIR WAS SALUTARY.—C. R. Agnew (Trans. Am. Opth. Soc.) relates several cases, when exposure of the eyes to the light and air was the chief factor in the treatment, especially in *phlyctenular keratitis*, when the best hygienic surroundings, dietetic regimen, and most approved therapeutic means had failed to relieve the photophobia.

Placed under ether in a well lighted room, the eyes were forcibly opened with a speculum, and for a minute or two exposed to a full flood of light or air, until the surface began to look dry; the excessive secretions were carefully removed from the *cul de sac* with a linen rag. This process was gone through with every other day, in all seven times, and every time with the effect of lessening the intensity of photophobia and the orbicular spasm. The result was in the highest degree satisfactory.

A like proceeding was instituted in a case of double trachoma with panniform cornea of traumatic origin, where photophobia was uncontrolable. The spring speculum was forced in, and could at first be endured only a few moments. But soon the patient learned to open the eyes voluntarily, which made the subsequent treatment comparatively easy.

Another which had been kept in a dark room for nine years was transferred to Manhattan Hospital. There he had to undergo a systematic drill of opening his eyes, which at first was stoutly resisted but as stoutly persisted in, until it was at last accomplished. The long seclusion of light and air blanched his skin, made him very anæmic, but which soon corrected itself under the wholesome hygienic and dietetic regimen.

From these and many similar cases, it may be safely adduced that the hitherto prevailing practice of excluding light and air

in many cases of eye diseases with photophobia, will be largely modified.

[It may not be out of place to add that I have for years deviated from this rule, and almost invariably recommended, and insisted on, as a *sine qua non*, an exposure to light and air in all cases of phlyctenular keratitis, and I never had cause to regret it. I also found that the out patients of the clinic got well as fast, and faster, with fewer permanent lesions, in iritis, in irido-choroiditis, as those who were kept indoors in darkened rooms. A black silk mask, or smoked coquilles is all the shadowing I recommend. I never require or consent to have the room darkened by closing the blinds in and outside shutters and shades, after cataract extraction. The habit of some eye patients of being in a dark room grows upon them, from which they cannot be easily weaned, undermining their health, and thereby retard the cure.—S. P.]

SECTION OF THE CORNEA.—I. VOSE SOLOMON, (*British Medical Journal*) recommends *section of the cornea* in certain diseases of the eye, of inflammatory origin; in abscess of the cornea; in deep seated ophthalmitis which threatens destruction of the eye; in irido-choroiditis sympathetica. He refers to two cases:

CASE I.—A child aged one year, suffering from muco-purulent conjunctivitis, with opaque cornea. On the ninth day when the conjunctivitis had subsided there remained still great photophobia, and large infiltration of the cornea, so that the iris could not be discerned; tension of the eye much increased. S. made a *horizontal incision* near the upper pupillary margin, through the entire thickness of the infiltrated cornea, with an immediate improvement of all the subjective symptoms. After four weeks the periphery of the cornea commenced to clear up; in another month the iris and pupil became visible; no anterior synechia; vision clear.

CASE II.—Scarlatina had caused the left eye of a girl, aged seven years, to become phthisical. In the right eye acute irido-choroiditis set in. Only a slight improvement followed the enucleation of the stump of the left eye. A *vertical incision* was then made through the cornea midway between the external pupillary margin and the limbus of sclera. Decided

improvement in seven days after the operation. Hyperæmia diminished, and the rather discolored iris cleared up. In the next two months, increased redness and photophobia recurred, but no iritis. Vision had so far improved as to be able to count fingers twelve inches off.

Solomon treated also a case of *pannus* of the cornea by free *incision* of that membrane. The sclera and the margin of the cornea were equally red, but the central part of the cornea was yellowish white, infiltrated and swollen. A vertical incision was made through the entire cornea with a Græfe knife. After four weeks the wound healed. Cornea and pupil clear.

DHANENS (*Ann. de la Soc. de Med. Anvers.*) reports three cases of very rebellious pannus, which resisted all the usual remedies in vogue, but yielded at last to the *inoculation* of *gonorrhœal matter.*

CRITCHET (*Med. Examiner*) *inoculated* the *product* of *acute blenorrhœa* in a case of a thick trachomatous pannus, with success. After three months the details of the iris were made out; could read Jæger No. 96.

MORTON (*Ophthalmic Hos. Rep.*,) mentions also two cases of pannus treated successfully by *inoculation with blenorrhoic pus.* One patient was treated by Bowman; he could not count his fingers on account of pannus; periotomy effected no improvement. The right eye was sound and protected by a bandage during the blennorrhœa. In six months he could read Jæger No. 4 at eight inches. The other patient had pannus on both eyes. Critchet *inoculated* the *secretion* of *blennorrhœa neonatorum.* One month later counted fingers at 14 feet with left eye, and 6 feet with right eye. In 4 months read Jæger No. 1 with left eye, and No. 4 with right eye.

[In this connection, I will add a typical case of *pannus trachomatosus* of *both eyes*, of two years standing, which came under my care in 1876, which was also successfully treated with *inoculation* of *gonorrhœal matter.* A woman aged 27, an attendant in a notion store, an embroiderer by trade, consulted me in June, 1876. She was totally blind, had hardly a perception of light; she had sat in a dark room for nearly two years; had to be led to the table and to bed; I found her suffering from a pannus trachomatosus of both eyes; the network of blood-vessels on the cornea was so dense that not a trace of the cornea was

visible; the lids were very much infiltrated, difficult of eversion and very trachomatous; she was very feeble, a wreck, both physically and mentally; she had been under treatment from the beginning, and the usual routine remedies applied. I saw no prospect of benefitting her by canthoplasty, periotomy, astringents, sulphate of copper, etc. I concluded to try inoculation as a *dernier ressort*. I took her to the St. Louis Hospital and consulted the medical and surgical staff. They all agreed that her case was almost hopeless, and the plan of inoculation of gonorrhœal matter perfectly justifiable. I explained to the patient and to her friends the gravity, severity and the uncertainty of the experiment; they had to assume the responsibility in case of failure; they not only agreed but were very anxious for it. After a long search I found a man with gonorrhœa of three days standing. I saturated some lint with gonorrhoic matter and placed it between and under her lids for about five minutes. I enjoined a perfectly passive proceeding and absolute rest on her. The next day or two gonorrhœal ophthalmia was manifest; the lids swelled up enormously, the secretion was abundant, pains great; she bore it all patiently; the inflammatory process was not interfered with in any manner or form; only the pus was wiped off the cheeks to prevent corrosion. In about two weeks the violence of the inflammation began to subside, and in three weeks the great change in the appearance of the corneas was unmistakable; they cleared up quicker than could have been anticipated; the pupils were visible at the end of the fourth week. In six weeks she counted fingers, and in ten weeks read Schnellen No. 16. Though the pannus and trachoma had left both eyes, yet only one became practically useful. The cornea of the other was very conical. Whether this keratoconus existed prior to the pannus or had developed during the panniform keratitis, I am not able to say. The patient has assumed her avocation of embroidery, reads her prayer book and enjoys good health. She has been seen frequently after leaving the hospital; her recovery seems to be permanent.—S. P.]

Translations from the French.

NEW MODES OF SURGICAL TREATMENT. ("Histoire de la Chirurgie Française" par le Docteur JULES ROCHARD. Edit. 1875. pp. 635, *et seq.*) Translated for THE JOURNAL by B. A. WATSON, M. D., Surgeon to Jersey City Charity, and St. Francis' Hospitals, Jersey City, New Jersey.

If surgery, regarded as a science, comes in contact with the most important questions of pathology and therapeutics, the surgical art properly so-called, is composed of details which the ancients better understood than we. Louis found that the surgeons of his time neglected too much the dressings and bandages, and that in perfecting the art they had forgotten the trade. The illustrious Secretary of the Academy of Surgery, if he were to pass to-day through our surgical wards, perchance would find that we are beginning to forget the art itself.

Great efforts have been made without doubt during the last twenty-five years to perfect this branch of surgery, which Lombard and Lecat considered as the most important of all; but the mental influences which have controlled the minds of the cotemporaries have served in a remarkable degree to turn them away from those subjects which directed the action our fathers. Theirs were especially artistic ones, exclusively useful. They applied the dressings with studied elegance, a sort of coquetry, which today seems to us puerile. Mathias Mayor struck the first blow at the classic bandaging of the school of Desault, and the indifference of those who followed has done the rest. The complicated and accurately applied bandages are employed now only in cases of minor surgery; this is a sacrifice made to tradition, an exercise for students; now no one attaches to it much importance, some even pretend not to occupy themselves with it. This indifference is regretable; the care that the surgeon takes in the application of a bandage is a relief to the patient and a homage rendered to the dignity of the art. It is proper to admit, however, that the choice of topical applications is a subject of more

importance, and it is on this side that the attention of the surgeon is most particularly fixed in these latter days. This question became one of real interest when the prevention of purulent infection began to occupy the professional mind; but to render an account of the reformation which resulted from this we must return to things of the highest importance.

1st. TREATMENT WITH WATER.—Following the reaction which had manifested itself towards the end of the eighteenth century under the influence of the work of Hunter, the surgeon had gradually given up the use of ointments, balsams and plasters, for the purpose of adhering to humectives and greasy bodies. Pibrac and Louis had, on the other hand, abandoned the use sutures, and the local treatment of wounds was gradually almost reduced to agglutinative bands whenever primary unions were aimed at, and the use of cerates and cataplasms when it was no longer possible to avoid suppuration. In despite of some attempts at reform[2] this state of things has lasted more than half a century. The treatment with water, therefore, as I have shown in the first part of this work[3] has not been able to acclimate itself in France, notwithstanding the examples and precepts of the military surgeons; but by a foreigner their teachings have been turned to profit. At Vienna, since the time when V. Kern denounced the use of charpie and ointments, and substituted for them simple[4] compresses soaked in luke-warm water, this authority has not ceased to be followed. In 1827, Walther, who had introduced it at the University of Bonn, claimed the priority, and defended this claim against Kern in a lively debate in the German journals. A pupil of the latter, Dr. Fritz, had likewise popularized this mode of treatment in the hospital of Prague. At Berlin, Langenbeck, in 1839, had praised the permanent warm water bath in the treatment of large wounds which was first suggested by Lamorier.[5] He flattered himself

2. Jules Guyot, *De la chaleur dans le traitement des ulceres, des plaies, après les amputations et les grandes operations chirurgicales.* Paris, 1842, in 8° avec quatre planches lithographiees representant les appareils.

3. Première période, chapitre iii, article 3, p. 72.

4. Vinc. Kern, *Avis aux chirurgiens pour les engager à accepter et à introduire une methode plus simple, plus naturelle et moins dispendieuse, dans c traitement des plaies.* Vienne, 1809; Nouvelle ed. 1825.

5. Langenbeck plaçait les parties blessèes dans de grandes boites imaginèes par Fock, un de ses élèves, et qu'il remplissait d'eau á 28° ou á 30°

by this means as being able to diminish pain and tension, to prevent pyohæmia, and to hasten cicatrization. His therapeutic innovation had much success in Germany.

Drs. Ulrich Wilms, (of Berlin), Wagner (of Dantzig), Zeis (of Dresden), adopted it, and during the Schleswig-Holstein war Langenbeck and Stromeyer had recourse to it with advantage in the treatment of gunshot injuries.

In 1855 Valette (of Lyons) had also employed prolonged immersion in the treatment of large wounds.[6] Similar trials were made in the hospitals of Paris during the following year; at Cochin by Gosselin, at the Hotel-Dieu by Laugier. The results were quite favorable; nevertheless they relinquished too soon this treatment, because of the difficulty of its application. It required watching every moment, and the constriction necessary to maintain the dressing on the injured limb was not easily borne, as LeBert has observed. In England, Ireland and Scotland the treatment with water took the place of all other systems, thanks to the efforts of Lister and Macartney.

Lister employed this method at the Royal Hospital, at Edinburg,[7] a long time, when in 1835 he imported it into the University Hospital, at London, which had just been erected. In 1836, Macartney addressed to the Academy of Medicine, a memoir, in which he insisted on the advantage of repose, position and cold water in the treatment of wounds of every nature. His confidence in the union of these means was such that he flattered himself, by their well directed employment, to be able to cure without pain, suppuration, or fever, penetrating wounds of the articulations, gunshot wounds with comminuted fractures of bone, and equally well other accidents of this degree of sever-

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Réaumur. Voyez P. Picard, *Application du bain local, chaud et permanent au traitement des plaies résultant de lésions traumatiques ou d'operations chirurgicales.* (Clinique de M. Langenbeck, à Berlin,) in *Gazette hebdomadaire* 1855, p. 872 et 1856, p. 184.

6. Pupier, *D'un traitement consécutif spécial des amputations, comme, moyen d'obvier aux accidents des grandes plaies*, thèse de Paris, 1855, et Valette, chirurgien en chef de la Charité de Lyon, *Sur une Nouvelle methode de pansement des grandes plaies.* (*Methode an aéro-plastique, in Gazette hebdomadaire,* 1856, p. 37.)

7. Thomas Morton, *Quelques remarques sur le Pansement des plaies et des ulcères a l'hôpital de l'université de Londres.* (*Gazette Médicale* de Paris 1838, t. vi. p. 536.)

ity.[8] Despite the authority of these two names the water dressings have had some trouble in taking root in the hospitals of the United Kingdom, and in the third edition of his operative surgery, published in 1840, Lister still raised his protest in all the power of the English language against the routine errors, against the use of balsams, ointments, pledgets, compresses and bandages, against daily washings performed with sponges of doubtful cleanliness, which he styled *dirty, abominable* practice, *revolting to nature and common sense.* Lister remained faithful to his principle until the end of his life; they finished by gaining their cause, and to-day the water dressings in the London hospitals are the rule, as Paul Topinard was able to authenticate in the journey made to England in 1860, and of which he published an account on his return.[9] It is there employed at the ordinary temperature, a little heated in winter, pure or with the addition of some aromatic substance. They soak in itpieces of lint, a kind of linen or hempen fabric, the downy surface is then applied to the wound. The whole is enveloped in an impermeable covering which differs in the various hospitals; they sometimes employ court-plaster, varnished paper sometimes, or sheets of gutta-percha; the hackneyed sponges are completely banished. Let us add that this treatment is powerfully aided at the same time with hygienic care of which we shall speak more hereafter. This method has likewise been adopted in Germany, as Bonnafont has had occasion to authenticate. At Vienna, Berlin and Munich he has seen wounds after major as well as minor operations, covered with linen soaked in water at the temperature of the wound.[10]

This mode of treatment is still in use in the hospitals of Vienna.[11]

In France it has been limited to several trials. In the month of October, 1849, R. Marjolin communicated to the surgical society very satisfactory results which he had obtained by the em-

8. James Macartney Professeur d'anatomie de chirurgie a la université de Dublin, *Observation sur la guérison des plaies dans inflammation.* (*Memoires de l' Academie de Medicine*, 1836, *t* v, p. 64.

9. Paul Topinard, *Quelques aperçus sur la chirurgie auglaise.* Thèse de Paris, 1860, in—4°, 132 pages.

10. Voyez la discussion académique sur la salubrité des hôpitaux. Séance du 10 decembre, 1861. (*Bulletin de l'Academie de Medicine*, t. xxvii, p. 2085.)

11. *Barthélemy, l'Exposition universelle et la faculté de Médicine de Vienne.* (*Archives de Medicine Navales* 1874, t. xxi, p. 219.)

ployment of cold water in the treatment of ulcers.[12] This communication made only a slight impression—no person appeared to be convinced—nevertheless the application of cold water, aided by the horizontal position, constitutes the best means of treatment with which we can combat varicose ulcers, as has been fully demonstrated many years since. Under this influence the eczematous redness which surrounds these large ulcers disappears, the exuberant granulations take on a healthy aspect, and the cicatrization, aided by some cauterization with the nitrate of silver, follows with sufficient promptness. When the ulcer is healed an elastic stocking will prevent a relapse. At the time this discussion took place, the attention of the profession had not been directed to these facts, but when the work of Topinard made its appearance they had commenced to occupy themselves seriously with them. However, it only had the effect of giving to the water treatment a momentary reputation; they continued to experiment with other methods. It was only ten years later that Leon LeFort[13] again called attention to this method. His simple treatment by continued bathing, only differed from that of the English, by the substitution of compresses for the lint, and by the addition of one-tenth part of alcohol to the water in which he soaked them; but he is entitled to the merit of obtaining the advantages of a uniform temperature, with a constant humidity, which is maintained by an impermeable envelope, and of the insulation of the injured parts, which it affords by protecting them from contact with the air. Nevertheless this mode of treatment, so very natural and economical, has not been able to be generalized in France, although it especially favors the hygienic condition of the hospitals in our large cities. The English, more favored than we, do not see purulent infection continually suspended over the heads of their patients, and it is this menace which has for all time occupied the minds of Parisian surgeons.

The water dressings have not appeared to offer a sufficient guarantee against it; there was need of more reliable preservations, or those which appeared at least to be such, and at the

12. R. Marjolin, *Traitement des ulcères par l'eau froide.* (*Bulletin de la Societe de Chirurgie*, t. -er, p. 378.

13. Léon LeFort, *Pansement simple par le bain continué*, Memoire lu à l'Académie de médicine le 31, mai, 1870, *Bulletin de l'Académie*, t. xxxv, p. 539.

epoch to which we refer, they devoted themselves to this investigation with an ardor and fertility of imagination most praiseworthy. It was under this influence that were born the greater part of these methods that we are about to review. Although they are somewhat numerous, they group themselves without effort about two principal indications.

The one class has for its object the neutralizing of some active toxic principles; the other the protection of the wound from contact with them. We designate the first under the general name of antiseptic dressing; the other under the name of treatment by occlusion.

[TO BE CONTINUED.]

Clinical Reports from Private Practice.

A CASE OF OPIUM POISONING. By Geo. W. COREY, M. D., of Cheyenne, Wyoming Ter.

On the afternoon of February 10, 1879, I was called in great haste to see Mrs. H., a married lady, 24 years old, who had taken a poisonous dose of laudanum, evidently with suicidal intent. About 10 o,clock that forenoon, while under great mental excitement caused by the outrageous conduct of a drunken brutal husband, she swallowed two ounces of tincture of opium. For the first hour and a half after taking the drug she labored under great excitement and intoxication, talked rapidly and incoherently, and finally told her sister, at whose house she was sojourning, what she had done. Her brother-in-law, a very intelligent man, who was at his business a short distance from the house, was summoned at once and gave her copious draughts of salt and water, which produced free vomiting; and as she now began to be stupid and listless, he kept her moving about the house. This proceeding was continued for an hour and a half, or until 1 o'clock, and as the fumes of laudanum were very strong in the matter ejected from the stomach she was thought to be out of danger and allowed to lie down, and the brother-in-law went to his business. She was left alone until half past two o'clock when her sister, who had been in another part of the house, discovered that she was sleeping profoundly, breathing very slowly

with a gurgling noise in her throat and could not be aroused. The brother-in-law was again summoned and directed constant rubbing of the extremities, while he did his best to induce respiration artificially. The rubbing of the limbs and the efforts at artificial respiration were vigorously kept up until my arrival at 10 minutes before 4 o'clock. I saw at a glance that the patient was in a most critical condition, and at once injected hypodermically fifteen minims of the tincture of belladonna. On careful examination I found the pulse about 120 per minute, rythmical though feeble; the respiration little more than gasping, 8 to 10 times per minute; the surface of the skin and nails were a deep purple, the pupils of the eyes contracted to the smallest size, and the temperature in the axilla 90°. Bottles of hot water were placed in the bed around the patient, and friction over the extremities kept up, while I directed my attention as much as possible to keeping up respiration artificially by the ready method of Marshall Hall. During the first fifteen minutes after the injection of the belladonna no perceptible change occurred, and another hypodermic injection of 30 minims of the tincture was then given. For fifteen minutes longer the friction and artificial respiration were continued, but no change for the better had occured in the breathing, nor had the pupils of the eyes enlarged perceptibly. I accordingly injected 15 minims more of the belladonna, and noticed that the natural efforts at respiration, which had been failing all the time since my arrival, were now almost entirely gone. I had no instrument at hand by which I could make use of electricity, and there was certainly no time to be lost. A handkerchief was placed over the patient's face, the head thrown back so as to straighten the neck; the nose was firmly grasped, and the mouth held open; then filling my lungs to their utmost capacity, I placed my mouth over that of my patient and forced the air into her lungs with all the strength I could muster.

This process was repeated about ten times a minute, for twenty minutes, at the end of which time, to my utter astonishment, my patient kept up natural breathing twelve to fifteen times per minute. The pupils of the eyes were soon fully dilated, the purple hue of the nails and skin disappeared, the pulse became full and less frequent, and the temperature soon rose to the normal standard and up to 102°, and at six o'clock consciousness had so far returned that she recognized her friends. She remained wakeful, the throat dry, stiff and sore, the voice husky, and the stomach very irritable during the next fifteen hours. All these sequels of opium poisoning, however, passed away without any unusual occurrence. I have thought it proper to report this case, first, because I was able to get a more correct and reliable history of it than one is usually able to get; secondly, as a case that shows how perfectly belladonna will antagonize opium in the human system; thirdly, it gives an important hint as to the best method of administering belladonna in cases of

opium poisoning, viz: in small and frequently repeated doses hypodermically—watching its effects upon the pupil of the eye and the respiration, until these give evidence that the drug has been pushed sufficiently. I should, however, under similar circumstances, give the thirty minim dose first, and repeat the fifteen minim doses at intervals of fifteen or twenty minutes, until the desired effect was produced.

Another Mite of a Child. By Dr. Elizabeth Townsend, of St. Louis, Mo.

Seeing in the February No. of the St. Louis Medical and Surgical Journal, Dr. T. A. Winn's brief history of an "unusually small child," I will give a short account of one in my practice in 1873. I was called at 11 A. M. to Mrs. M———; seventh month; pregnant with eighth child. I found her with expulsive labor pains, and in less than one hour a female child was born, which weighed (minus the wrappings) *two pounds*. It seemed very lively.

The day previous she had carried a patent bucketfull of ripe currants from a friend's house, some blocks (up grade) from her own house, and felt tired at the time.

I enjoined for the child perfect quiet, a strictly even temperature, and not to be disturbed only when necessary, which orders were carefully carried out for a few days, nursing nicely. Their vigilance began to relax. As it was such a novelty it was uncovered to the gaze of any one whom curiosity took to the house. More than this it was carried to the open door, and from room to room, catching draughts of air. It began to grow feeble, would not nurse and gradually declined. At the end of two months it died, looking exactly like a little wax figure.

The Infusion of Buckeye as a Remedy for Chronic Rheumatism. By W. S. Drake, M. D., of Fair Play, Mo.

I had an inveterate case of chronic rheumatism cured by the patient bathing in an infusion of buckeye (*Æsculus Hippocastanum*). He had not walked for nearly two years, and had gone through the whole routine of rheumatic remedies. While treating a horse with the infusion of buckeye, he found the swelling to rapidly disappear from his hands. He then applied it to other joints, and received the same benefit. I hope the profession will give it a thorough test.

Proceedings of Medical Societies.

AUDRAIN COUNTY MEDICAL SOCIETY.

The Audrain County Medical Society met Feb. 28th at the usual hour in Dr. French's office. The minutes of last meeting were read and approved. A motion carried, making it the duty of the Secretary (instead of the President,) to notify all members of the society of the time of our regular meetings, one week in advance of each. Dr. W. W. Rodman was nominated for membership, and declared by the secretary elected unanimously. The Executive Committee appointed Dr. Macfarlane essayist for our next meeting, assigning him the subject of "Acute Inflammatory Rheumatism."

Owing to the absence of Dr. Humphreys, who had been appointed to read a paper this evening, on the subject of acute pneumonia, by request, Dr. Macfarlane favored the society with a short and very interesting account of his recent visit to the St. Louis schools of medicine. He spoke in the highest terms of the kind treatment bestowed upon him by the members of the faculty, and also by the editor of the ST. LOUIS MEDICAL AND SURGICAL JOURNAL. He described in full as he saw it performed, an operation for recto-vaginal fistula, also the treatment of endo metritis by iodine injections. He mentioned also a case of retroversion of the uterus, which was replaced in one minute's time, and held in position by the use of Hodge's pessary. The Doctor gave a detailed description of an interesting surgical operation performed by Dr. Hodgen. He stated that sulphuric ether was the anæsthetic agent used in all the cases that he witnessed; did not see chloroform administered in any instance.

Dr. Keeton spoke in very decided terms of opposition to the custom practiced by the society, of continuing the essayist from time to time, who, from neglect, fails to have his paper ready and before the meeting at the proper time. His remarks on this subject seemed to express the views of all the members present. It was suggested by the Secretary, that hereafter, to prevent disappointment by the necessary absence of the essayist, his paper may be placed in the hands of any member of the society, who shall cause it to be read at the proper time. The suggestion met with approval from all.

By resolution, article first of the by-laws was changed to read "four members" shall constitute a quorum for the transaction of business, instead of "seven," as heretofore.

An interesting paper was then read before the society by Dr. French (which will appear in the May number).

After some discussion, the society adjourned to meet on the 4th Friday in March. A. M. PATTERSON, Sec'y.

ST. CLAIR COUNTY MEDICAL SOCIETY.

The St. Clair Co. (Ills.) Medical Society met in E. St. Louis, on the 6th ult., President Dr. L. Bremer in the chair. There being but one session not much time was given to scientific discussion. The subject of diphtheria, however, was taken up and remarked upon by Drs. Bremer, Moore, Sisson, Bechtold, Rubach and others.

Amongst the routine business, the following preamble and resolutions, touching the relations of doctors to newspapers, were offered by Dr. Fairbrother and unanimously adopted:

WHEREAS, we regard the public press as a very valuable aid to the progress of medical science, and as standing intimately related to the best interests of the medical profession, and

WHEREAS, this is the avenue by which, very often, great notoriety and emolument are obtained by impostors who are not members of the profession, but who assume the name only to disgrace and dishonor it, who take charge of cases of which they are utterly ignorant, and insure cures where not even relief is possible, and

WHEREAS, this means of public notice is a grave temptation to many members of the profession, and

WHEREAS, those who obtain the most notice of this kind are, as a rule, the least worthy of notice of any kind; therefore be it

Resolved, (1) That we extend our hearty thanks to the press of this vicinity for their support and co-operation, in the advancement of the medical profession, and especially in the matter of the law lately gone into effect which has for its object the improvement of the medical practice of the State.

Resolved, (2) That we politely invite the managers of the various newspapers in this vicinity to refrain from publishing the names of the physician or surgeon in attendance in items of accident or sickness, unless such publication relates to the interest or sense of the item.

Resolved, (3) That it is unprofessional for the name of a physician or surgeon to appear in the public prints in connection with any remarkable exhibition of his skill.

Resolved, (4) That the less frequently the names of medical men appear in the newspapers the better it is for the dignity of the profession.

MACOUPIN COUNTY SOCIETY FOR MEDICAL IMPROVEMENT.

The first regular quarterly meeting for 1879, of the Society of Macoupin County for Medical Improvement, was held in Carlinville, Jan. 21st. Meeting called to order by the President, Dr. A. B. Penniman, at 11:30 A. M. Twenty members present.

On account of the temporary absence of the Secretary and Assistant Secretary, Dr. Brother was appointed Secretary *pro tem.* Reading minutes of last meeting postponed till afternoon session. Dr. Wm. Day proposed Dr. J. M. Day, of Palmyra, for membership. Proposition referred to Board of Censors.

In accordance with Dr. Brother's motion to that effect, made at the last meeting, the discussion of Dr. Crawford's paper on "Dysentery," was next in order. All the gentlemen present agreed in heartily commending the paper, but differed to some extent with the writer, and with each other in regard to the treatment.

Dr. Clement gave a saline cathartic, and followed it by full doses of choral hydrate.

Dr. Brother gave a hypodermic injection of morphia to relieve the pain, tormina and tenesmus; gave also ice cold water injection per ano; had obtained excellent results with this treatment. In chronic cases he had met with good success by the use of nitrate of silver injections.

Dr. Seaman gave opium in pills, the older and harder the better; the cold water enemas had never succeeded well with him. In chronic cases he relied upon a good substantial diet and tonics.

Dr. Lane was opposed to the use of calomel in dysentery. He put his chief reliance in opium in some one of its forms.

Dr. J. P. Mathews thought that if calomel accomplished any good in this disease it was by relieving the portal congestion. In the treatment of dysentery he used large doses of opium, but preferred some other preparation to that of morphia.

Dr. Ash was opposed to the use of mercury in any form; he had no faith in the cold water injections, but regarded opium as the sheet anchor in the treatment of this disease.

Dr. Holliday had met with good success in the treatment of this disease by using blue mass, rhubarb and opium. After some further discussion the Society adjourned till 2 o'clock P. M.

AFTERNOON SESSION.

Meeting called to order by the President, at 2:15 P. M. Members present, twenty.

Minutes of last meeting read and accepted.

Dr. A. C. Corr proposed for membership, Dr. F. T. Corgan. Referred to Board of Censors.

Committee on Programme reported as follows: Next place of meeting at Brighton.

Essayists.—Dr. Mitchell, Typhoid Fever; Dr. J. R. Lane, Use of Obstetrical Instruments; Dr. H. T. James, Septicæmia. On motion the report was accepted.

The Board of Censors reported favorably in regard to Drs. James M. Day and F. Corgan, and recommended them for membership in this Society. Moved and carried that the report be accepted, and that we proceed to ballot for Drs. Day and Corgan. These gentlemen were then duly elected members of the Society.

The special committee on the interpretation of Sec. I, Art. 4, of the American Code of Medical Ethics reported as follows:

Gentlemen of Missouri: Your committee appointed to report the interpretation to this Society of Sec. I, Art. 4, of the code o medical ethics, would respectfully submit the following: While the ethics in many places show an ambiguity of expression, as if words were intended to conceal rather than convey ideas, an examination of Sec. I, Art. 4, reveals language so plain that in the opinion of your committee, only one construction can possibly be placed upon it, which is that no consultation shall be had with any other person preaching a dogma, not with a physician not in good moral and professional standing.

The American Medical Association, at its session of 1869, went a step a farther, and by resolution decreed that regular graduates of medicine practicing irregularly were excluded from professional recognition. The question then hinges on what constitutes a consultation or professional recognition. After looking the ground over carefully, your committee feel that instead of this construction being left to individual feelings or desires, an authoritative interpretation by this body for the government and control of its members will be the cause of the greatest and most permanent good; they therefore would recommend your body to adopt the following for the government of this Society, and the control of its members:

Resolved, Accepting an invitation from or extending an invitation to any person practicing medicine to see a patient or accepting a call, and prescribing or making suggestions for a patient while in, or to be continued in, the charge of any person called a physician, must be construed as a consultation.

FRED. BROTHER,
A. C. CORR,
M. W. SEAMAN,
F. A. CLEMENT.
} Committee.

Dr. J. P. Mathews moved to amend the above by substituting the following:

WHEREAS, In the language of the code, medicine is a liberal

profession in which all who enter its ranks should act liberally, not only with each other, but with all mankind; therefore, be it

Resolved, 1st, That it is the opinion of this Society that the act of consultation is sufficiently interpreted and the consulting physician's conduct sufficiently directed in Art. IV, Sec. 20, of the Code of Medical Ethics, where it reads "a physician who is called upon to consult should observe the most honorable and scrupulous regard for the character and standing of the practitioner; and further, be it

Resolved, That any conduct on the part of a regular physician meeting an irregular practitioner falling short of said part of said section, can not be construed by this Society as consultation."

After some farther earnest discussion, the motion to amend by the adoption of the substitute was lost.

On motion, the original report of the committee was adopted by a vote of eight to ten.

The Society then listened to an interesting paper on "Scarlet Fever," by Dr. Gross, of Gillespie.

On motion the paper was received and submitted to the Society for discussion. The debate which ensued was participated in by nearly all present.

The hour being quite late the Society adjourned to meet in Brighton, the third Thursday in April.

G. E. BUCKNELL, Sec'y.

SOUTHEAST KANSAS MEDICAL SOCIETY.

According to an adjournment of the primary meeting of physicians of Southeast Kansas, held at Girard, on the 7th day of February, 1879, and after due notice having been given by the Society as instructed, the following named physicians met at the Council Room in the city of Fort Scott, Kansas, April 1st, 1879: Drs. R. J. Peare and C. P. Lee, of Louis County; Drs. J. H. Conch, S. S. Sanger, F. F. Dickman, B. F. Hepler, R. Aikman and G. R. Baldwin, of Bourbon County; Drs. W. W. Watkins, R. B. King, J. H. Cusherbery, Wm. H. Warner, G. W. Scholl, J. W. Wallace, T. Barnett, C. E. Taylor and Allen Wilson, of Crawford County; and Dr. J. K. Barney of Cherokee County.

Dr. W. W. Watkins, temporary Chairman, called the meeting to order. Minutes of the primary meeting were read and approved.

The Committee on Incorporation reported favoring the form-

mation of an auxiliary to the State Medical Society, as provided under their constitution and by-laws, and recommended that the claims of this Society be presented to the State Medical Society at its next annual meeting for its action, by the officers which shall be elected at their meeting, and that they report at the next meeting of this Society.

On motion the report was received and adopted and the committee discharged.

The Committee on Constitution and By-Laws reported favoring the adoption of the constitution and by-laws of the State Medical Society with such changes as may be necessary, in order to make them applicable to a district medical society. After reading as so changed, adopting the name "Southeastern Kansas Medical Society," it was moved and seconded that the report be received and the constitution and by-laws be adopted for the government of this society, and the committee be discharged. Carried unanimously.

It was moved and seconded that the Chairman appoint a committee of five to nominate gentlemen for the various offices for the ensuing year. Carried.

The Chairman appointed Drs. Hepler, King, Peare, Barney and Cushenbery.

The committee reported as follows:

President—Dr. G. R. Baldwin, Fort Scott, Kansas.

Vice-President—Dr. W. W. Watkins, New Pittsburgh, Kansas.

Secretary—F. F. Dickman, Fort Scott, Kansas.

Treasurer—R. J. Peare, Pleasanton, Kansas.

Members Board of Censors—Drs. B. F. Hepler, J. H. Cushenbery and R. Aikman.

Committee on Surgery—Drs. Wm. H. Warner, R. B. King, and J. K. Barney.

Committee on Practical Medicine—Drs. J. R. Peare, C. P. Lee and S. S. Sanger.

Committee on Obstetrics—Drs. G. W. Scholl, J. H. Conch and T. Barnett.

Committee on Materia Medica—Drs. R. B. King, J. H. Cushenbery and W. W. Watkins.

On motion the report was received and the committee discharged.

On motion the rules were suspended and a permanent organization effected by the election of officers as named in the report, by acclamation.

The President elect took the chair.

It was moved by Dr. Watkins and seconded by Dr. Hepler that the next meeting be held on the second Tuesday in July, being July 12th, 1879, in the city of Fort Scott.

It was moved and seconded that the initiation fee be one dollar and the annual dues one dollar, payable quarterly. Carried.

The Secretary was requested to furnish a copy of the minutes to the ST. LOUIS MEDICAL AND SURGICAL JOURNAL for publication.

G. R. BALDWIN, President.

F. F. DICKMAN, Secretary.

ARKANSAS MEDICAL COLLEGE.

At a regular meeting of the "Little Rock and Pulaski County Medical Society," held at their rooms April 5, 1879, the following faculty was elected to put into operation "The Arkansas Medical College," under the charter granted said school of medicine in the year 1874:

William Thompson, M. D., Professor of Principles and Practice of Medicine and Dean of Faculty.

James A. Dibrell, Jr., M. D., Professor of Principles and Practice of Surgery and Clinical Surgery.

D. H. Dungan, M. D., Professor of Materia Medica and Therapeutics.

Edward Cross, M. D., Professor of Obstetrics and Gynæcology.

A. H. Scott, M. D., Professor of Anatomy and Ophthalmology.

J. H. Southall, M. D., Professor of Nervous Diseases and Medical Jurisprudence.

Claiborne Watkins, M. D., Professor of Chemistry and Pharmacy.

J. M. Pirtle, M. D., Professor of Clinical Medicine and Diseases of Children.

J. J. Jones, M. D., Professor of Physiology and Secretary of Faculty.

John R. Colburn, M. D., Demonstrator of Anatomy.

Periscope of Current Medical and Scientific Literature.

THERAPEUTICS.

PRODUCTON OF OPIUM IN CHINA.—A series of reports on the opium trade in China have been recently gathered together from the various British consuls residing in the Celestial empire. Though opium cultivation is ostensibly prohibited in China, it is, nevertheless, not only carried out on a large scale, but is increasing rapidly, the cultivation being much more profitable than that of wheat and other food crops. Thus it is asserted that if the Chinese government were really and sincerely desirous to stop its growth it would be quite unable to do so. From Newchwang the reporter says: "Though the growth of the poppy is prohibited by the imperial government, this prohibition is regarded as a dead letter in many districts, and the cultivation is encouraged by the local authorities, as the inland dues levied on native opium, though lighter than those on the imported drug, are much heavier than on any other description of native produce, and their receipts proportionally greater." The chief opium producing provinces are Yunnan, Kweichow, Szechuen, Shansi, and also Eastern Mongolia and Manchuria. In all these provinces poppy cultivation has made rapid progress, and in some parts the opium has improved in quality. In the opium producing districts the smokers are estimated at five-tenths of the native male population, and the proportion throughout China is computed at three-tenths of the native male population. The consumers of native Chinese opium consider it to be less deleterious in its effect than the foreign produce. It is stated, however, that some authorities hold a contrary opinion. An authority of some importance gives it is a fact that a much larger quantity of native than foreign opium is required to produce a like state of stupor; and in the case of the Manchurian produce, in addition to this inferiority of quality the effects of indulgence in it use are more deleterious. The native opium is said to be coarser and more fiery and the flavor inferior to the Indian.

Regarding its capabilities for smoking, Mr. Adkins, reporting from Newchwang, says: "There can be no doubt that the residue, after smoking the native drug, is much more available for again passing through the pipe than the residue of the foreign drug. It is said, indeed, that good native drug can be passed four our five times through the pipe. Against this must be set the fact that the foreign drug is more satisfying than the native.

A pipe of native opium at 6 A. M. will require a second at 10 A. M., whereas the craving would not return after the foreign drug sooner than noon." In the northern provinces, Shansi, Shensi, and Kansuh, poppy cultivation requires very great care on the part of the grower, together with the richest possible soil. It is grown with the utmost success on the terrace slope or the most fertile bottom land, which allows of thorough irrigation, and which would be devoted to the cultivation of wheat and vegetables were it not for the very large profits derived from the prepared opium. In the provinces just referred to "there is a limit beyond which the the poppy cannot be raised with remuneration to the grower, and the production is never likely to be much in excess of the demand for consumption. In the southern and central provinces, on the other hand, the poppy cultivation does not interfere to any considerable extent with that of grain, especially in Szechuen, where the difficulties of transport in supplying a deficiency in the local crops from the neighboring provinces render necessary the retention of large tracts of land for the raising of grain. The soil here is so rich and fertile that the most suitable ground for poppy is the terraced hillsides, where the effects of the heavy rains frequent at certain seasons of the year and which would render the low lying fields too damp, are, comparatively speaking, unfelt. Sown during November the poppy blossoms early in April, and comes to maturity within a month, thus leaving the fields free for a summer crop. Before the poppy has seeded, an intermediate crop of maize, wheat, cotton, or tobacco is grown, the poppy stalks being cleared away in time to prevent interference with the young shoots." The opium yield is very uncertain, being much affected by the state of the weather during the growth of the plant. Thus bad weather may ruin a whole year's crop, but on the contrary one good season may recoup the losses of several bad ones.

In Shantung, it appears that native grown opium is seldom or never used alone, owing to its hot and unpleasant flavor. It is usually mixed with an equal quantity of Indian opium. The increasing consumption of opium here is stated to be clearly caused by its cheapness, added to the belief that it is less injurious in its effects than the Indian drug. Though Bengal opium is chiefly used in the Suchow and Changehow prefectures, the native opium is largely used for mixing purposes, and in the districts north of Yantze, where Malwa is chiefly consumed, the native product, although smokers of Malwa are said to take to it less easily than smokers of Bengal opium, has already affected the consumption of the foreign article. The Indian product is almost exclusively used in Shangai.—*Pharm. Jour. London.*—*The Druggists Circular.*

PIMENTO AS A REVULSIVE.—To the list of revulsives and local irritants, M. Lardy adds the extract of pimento. The color of

the extract, like that of the fruit, is a beautiful red. By being incorporated with a plaster, it may be spread upon cloth or paper, and adheres to the surface of the skin without warming. It acts rapidly, ten to twenty minutes being the usual limit, according to the point of application and sensitiveness of the skin. From the outset it causes heat, redness and slight smarting. These phenomena increase in degree for about three hours, and then remain stationary. Neither the heat nor smarting are painful, and do not hinder the patient continuing his occupation. There is no itching, and the effect remains localized. Compared with mustard, it is of about half the strength of the latter.—*Canada Med. Rec.*

EXTRACT OF PIMENTO AS A REVULSIVE. (dr. ed. couturier.)—In cases where the persistent and blistering properties of cantharides would produce too great an effect, and where the ordinary rubefacients, as tartar emetic, croton oil and thapsia, are not active enough, the extract of pimento may be used, which produces intense rubefaction within ten to thirty minutes. Particular care must be taken to clean the hands after handling it, so as not to get any into the eyes, nose, or mouth.—*Ibid.*

THE EUCALYPTUS IN ALGERIA.—Consul-Gen. Playfair writes: Formerly it was impossible for the workmen at the great iron mines of Mokta-el-Hadid to remain there during the summer; those who attempted to do so died, and the company was obliged to take the laborers to and from the mines every morning and evening, 33 kilos each way. From 1868 to 1870 the company planted more than 100,000 Eucalyptus trees, and now the workmen are able to live all the year through at the scene of their labors.—*Canada Med. Rec.*

ANTIDOTE TO CARBOLIC ACID.—The Pharmaceutische Zeitung für Russland says that on the recommendation of Professor Baumann, Dr. Sanftleben has used sulphuric acid in several cases of poisoning by carbolic acid with the best success, the phenol combining with the acid to form phenyl-sulphuric acid, which is not poisonous. He administered it in a mixture composed of diluted sulphuric acid 10.0, mucilage of gum, 200.0, and a simple syrup 30.0 grams, in doses of a tablespoonful every hour.—. *Louisville Med. News.* (*New Orleans Med. and Sur. Jour.*)

TREATMENT OF OBSTINATE HICCOUGH BY PILOCARPINE.—Dr Ortille, of Lille (*Bull Général de Thérap. 1878*) gives an account of a case of obstinate hiccough in which, after trying all the usual remedies, he had recourse to electricity. For a few hours the application appeared to prove successful; but the hiccough caturned. Remembering what he had read of the action of pilorerpine upon the phrenic nerves and of the vomiting which often follows its use, he injected two-fifths of a grain of pilocarpine

under the skin. The effect was almost instantaneous. A quarter of an hour after the injection the patient was covered with sweat, salivation was established, and the hiccough had definitely ceased.—*London Med. Rec.* (*Canada Med. Rec.*)

NEW METHOD OF COVERING THE TASTE OF COD-LIVER OIL.—Dr. Ponteres mixes a tablespoonful of cod-liver oil with the yellow of an egg, and when they are thoroughly combined adds to them a few drops of spirits of mint and half a glass of sugar-water. In this way he obtains a sort of mulled egg, which differs very little from ordinary mulled egg, and which presents neither the taste nor the odor characteristic of cod-liver oil. It can consequently be taken without repugnance by the most fastidious patients.—*Union Med.*

REMOVAL OF MOLES UPON THE FACE.—Dr. Llewlen Thomas advises (*British Medical Journal*) the use of the acid nitrate of mercury for the removal of moles upon the face. No pain attends the application, if care be taken to prevent touching the surrounding skin. The growth gradually shrivels away; the slough falls off in about a week, leaving only a very faint depression like a very indistinct small-pox mark.—*Canada Med. Rec.*

TREATMENT OF WHOOPING-COUGH BY THE TINCTURE OF MYRRH.—According to Dr. Campardon, pertussis yields readily and easily to the tincture of myrrh. He gives fifteen drops in a tablespoonful of Vichy-water every hour or every two hours. This treatment, however, must be combined with the appropriate treatment for the bronchitis or the pulmonary congestion.—*Lyon Médical.*

TREATMENT OF CEREBRAL APOPLEXY BY INJECTIONS OF ERGOTINE.—Mr. Foster reports two cases of pronounced apoplectic coma, which were treated by the injection of twelve drops of a solution of ergotine containing seven and a-half grains to the drachm of vehicle. In both cases the coma disappeared soon and recovery took place. The essential condition for the success of the treatment is, that the injection be administered at the beginning of the attack, before there has been time for an extensive extravasation of blood. Mr. Foster recommends injecting the fluid between the muscles of the forearm, and not merely under the skin, where it is liable to excite suppuration.—*The Lancet. Med. Rec.*

TREATMENT OF CRACKED NIPPLES.—Dr. Haussmann has found that lint, soaked in a two per cent solution of carbolic acid, applied to the nipples, and wetted every two or three hours with the same, gives immediate relief to the pain, and causes complete healing (although the baby is still nursed from the nipples) in two to three days.—*Med Record.* J. S. B. A.

GYNÆCOLOGY.

GYNECOLOGY IN LUNATIC ASYLUMS.—Dr. Seguin remarks: By peripheral irritation I mean not only a nervous disturbance elsewhere in the brain, but an irritation of any of the organs. Dr. Storer has written a small work on the influence of uterine diseases over mental troubles, and has shed considerable light on the subject. I have no doubt that to-day a large number of females patients in asylums need a specialist and many could be cured by the replacement of a uterine version, or the curing of an inflammation. Superintendents of asylums, as a rule, are incapable of attending properly to these maladies, and they have an averson to calling in an outsider. Some have a great repugnance to such cases, for fear of being accused of assault. For very many reasons every asylum should have consulting physicians and surgeons. Dr. Storer cites case after case, showing a cause of insanity to be due to some uterine difficulty, and European statistical reports point the same way.—*Hosp. Gaz., N. Y.*

INNERVATION OF THE UTERUS AND OF ITS VESSELS.—A communication is made in the *Wien. Med. Jahrbucher* by v. Basch and Hoffman, giving the results of numerous experiments they have performed on dogs. They find that the uterus receives its motor fibers from two sources. On the one hand, from the hypogastic nerves proceeding from the posterior mesenteric ganglion; and, secondly, from nerve-fibers issuing from the sacral plexus. It is well known that Spiegelberg denied any motor power to the hypogastric branches, and Frankinhauser considered that the sacral branches were destitute of motor power. Now, according to the remarks of Basch and Hoffmann, a very distinct antagonism exists between these two sets of nerves. If the hypogastric be electrically stimulated, contraction of the circular fibers of the uterus take place, the cervix descends in the vagina, whilst the os opens. On the other hand on stimulation of the sacral nerves the longitude fibers are made to contract, the uterus becomes shorter, and the os remains closed. Suppression of respiration, or stimulation of the sciatic nerve, acts in a reflex manner, chiefly on the hypogastric nerves. Their experiments farther showed that the vessels of the uterus obtain their nerves from the same sources as the muscular tissue, the nervi hypogastrici supplying the constructing and the sacral nerves the dilating fibers, which can likewise be brought into action reflectorially through the sciatics.—*Lancet.*

INFLUENCE OF UTERINE DISEASE ON NERVOUS DISORDERS.—A

recent writer counts among the most notable instances of this, neuralgia supra-orbitalis, maxillaris, and laryngo-bronchialis (uterine cough); also neuroses of the heart, causing painful palpitations, and spasmodic contractions of the bladder and bronchia (uterine asthma). All these symptoms become aggravated at the time of the commencement of the menstrual flow. The author observed one patient affected with this kind of asthma, who had long passed the climacteric, but whose asthmatic attacks were always most severe at the times at which the menses used to appear. Ordinary asthma also becomes worse under the influence of uterine disease.

Uterine affections frequently give rise to spasm of various muscles and to paralysis of one or both lower limbs. Both of these conditions usually come on very gradually, and they never become complete.

The peripheral reflex irritation caused by uterine diseases often acts, in conjunction with other causes (*e. g.*, hereditary taint, defective nutrition, domestic trouble, etc.), in giving rise to mental disease.—*Medical and Surg. Rep.* W. B.

OBSTETRICS.

PREMATURE LACTATION.—I was called to attend the child of Mrs. H., aged five months, and found it suffering with trismus nascentium or infantile lockjaw. The apartments were damp and other hygienic conditions bad, and probably caused the disease. Opium, chloroform, nitrate of amyl were tried without avail, and the child died the following day in a fit or spasm. Previous to leaving the house I carefully examined the lungs and heart in hopes of finding some inflammatory disease of the lungs which might account for the tetanus, and also the mammary glands. These glands were enlarged, and upon the application of the breast-pump milk was drawn from them both. There is a *theory* that premature lactation causes the tetanic symptoms in children, but it *has* not been established as a fact.

The recent works on infantile complaints state that lactation occurs in French and German children, but seldom, if ever, in those born here. Dr. Good, in his "Study of Medicine," reports three cases of this idiosyncrasy in girls and also one in a male Indian. An English midwife informs me that in England it is quite a common thing to see children a few months after birth give milk when the breast-pump is applied. The malformation (if it can be considered as such) is but an abnormal development of the glands due to some cause not understood.—*Hospital Gaz.*

VERATRUM VIRIDE HYPODERMICALLY IN PUERPERAL ECLAMPSIA.—Puerperal eclampsia has been successfully treated in four cases by veratrum viride, administered hypodermically, by Dr. G. W. Griggs. The dose used was from two to four drops of the tincture, administered as often as necessary to keep the pulse down to sixty.—*Southern Clinic.*

DR. MURCHISON says: (1.) The duration of the incubation stage (of scarlatina) may be only a few hours. (2.) Probably in a large proportion of cases it does not exceed forty-eight hours. (3.) It very rarely exceeds seven days. (4.) Consequently, a person who has been exposed to scarlet fever, and does not sicken after a week's quarantine, may be pronounced safe. He thinks, too, that facts prove the infecting power of scarlet fever from its earliest stage, although probably it is less during the first two or three days than a case of measles. On the contrary its power of infection may extend over a period of many weeks. To pronounce a patient out of danger at the end of a month, after the apparent cessation of desquamation, is not always safe. He considers it a good rule to consider no case safe until after the eighth week.—*Boston Med. and Sur. Jour.*

PROFESSOR PENROSE recommends vinegar in post partum hemorrhage for the following reasons: (1.) It can be easily obtained. (2.) It can be easily applied, and instantly, without special apparatus. (3.) It always cures the hemorrhage, or rather it has not failed in his practice. (4.) It is sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious. (5.) It is an admirable antiseptic. (6.) It acts upon the lining membrane of the uterus as an astringent. The remedy is applied as follows: saturate a rag or sponge with vinegar, carry it into the cavity of the uterus, and squeeze it.—*Boston Med. and Sur. Jour.* W. C.

DISEASES OF THE NERVOUS SYSTEM.

PECULIARITIES OF INEBRIETY.—In his fourth annual report of the Asylum for Inebriates at Walnut Hill, Hartford, Conn., Dr. T. Crothers gives the particulars of a number of cases which have been under treatment. Many curious facts are presented, in a history of these cases, illustrating the periodic character of the drink-craving, which returns after an interval that can be definitely calculated within an hour; or the insane-like madness which ignores everything but the gratification of its impulses; or the precipitate revulsion of character and motive

passing swiftly from one extreme to the other; or the sudden explosion of the diseased impulses, under conditions of excitement and change, etc. All these are significant of laws and forces moving in regular cycles as fixed and definite as that which governs the planets.—*Medical and Sur. Rep.*

HYDROPHOBIA CURED BY OXYGEN.—This case is reported by Drs. Schmit and Zebeden from Russia: The first symptoms of rabies appeared seventeen days after the injury. The patient was made to inhale three cubic feet of oxygen, and two hours afterwards he was in a state of perfect calm. Two days afterwards the symptoms of rabies reappeared, and another inhalation of oxygen was administered with the same success. This time the inhalation was continued for forty-five minutes. A slight dyspnœa, which persisted after the disappearance of the graver symptoms, was treated for three weeks by the monobromide of camphor.—*Lyon Medical.* C. H. H.

PHYSIOLOGY.

ORIGIN OF AMNIOTIC FLUID.—(Gusserow. *Arch. f. Gynäk.*. XIII.) In 1871 G. demonstrated that soluble substances would pass by way of the circulation from mother to child, and from the latter to the amniotic fluid. He claims that this fluid is not only an exclusively fœtal product, but that during the latter months of pregnancy it is mostly secreted by its kidneys.

Runge and Shmiedeberg proved that the conversion of benzoic into hippuric acid occurs only in the kidney. If hippuric acid be found in the urine of the fœtus after the mother had taken benzoic acid, the former must perforce have been formed in the kidneys of the fœtus, the blood carried to the latter being charged with benzoic acid. So, if hippuric acid be found in the amniotic fluid it must have been formed in the kidneys also, for if that fluid were merely a transudate, benzoic and not hippuric acid would be present.

Gusserow shows in a striking way that both the urine and amniotic fluid of the child contain hippuric acid when one to two grams of sodic benzoate were administered to the parturient several hours prior to rupture of the membranes.

From these and such experiments as the injection of strychnia, he is led to believe that the amniotic fluid is mainly an excretion of the child, though it may have other minor sources. —*Chicago Med. Jour. and Ex.* I. N. L.

News Items.

Call For A Convention of all American Medical Colleges, to be held in the city of Atlanta, Ga., beginning at 10 A. M., Friday, May 2d, 1879.

Ed St. Louis Med. and Surg. Journal :

Dear Sir :—At the meeting of the American "Medical College Association," held in Buffalo, N. Y., June 1878, Prof. S. D., Gross, a delegate from Jefferson Medical College, of Philadelphia, offered the following preamble and resolutions :

"Whereas, It is eminently desirable that the medical schools of this country should adopt a uniform system of instruction of a grade fully in accord with the requirements of the age in other branches of study, and with the practice of the medical institutions of Europe; and,

"Whereas, All the efforts to bring about such a change on the part of the American Medical Association, of the Association of Medical Teachers assembled at Cincinnati in 1867, and at Washington in 1869, and of different State Medical societies, have signally failed; and,

Whereas, The present time seems to be peculiarly favorable for taking strong ground upon the subject, inasmuch as it is now attracting general attention throughout the United States; therefore,

"*Resolved*, That this Association respectfully and earnestly request that the regularly organized and accredited medical schools of the United States hold at their earliest convenience a meeting for the purpose of adopting some definite and final action upon a subject of such vital importance to the dignity, character and usefulness of the profession and the welfare of the American people.

"*Resolved*, That in order to impart proper efficiency to this plan each and every college be requested to send two delegates, consisting of one member of each board of trustees, and of one member of each faculty, with full power to act for their respective institutions.

"*Resolved*, That the medical and secular press throughout the United States be respectfully requested to lend their aid in the dissemination and discussion of these preambles and resolutions in order to place the whole matter of medical education prominently before the profession and the people.

"*Resolved*, That a copy of these preambles and resolutions, signed by the President and Secretary of this Association, be transmitted to the officers of every regularly constituted medical college in the United States, with a request to hold the con-

templated meeting at Washington City, or at some other central point, on the first Wednesday in September next, or as soon thereafter as possible."

Prof. N. S. Davis seconded these preambles and resolutions, and heartily endorsed them.

Prof. T. G. Richardson moved that the time of the proposed meeting be fixed at the Friday preceding the meeting of the American Medical Association, and that the place be designated by the President of this Association. This amendment was adopted, and the preamble and resolutions as amended were adopted.

In compliance with this action of the American Medical College Association, its Acting President, Prof. N. S. Davis, of Chicago, has designated *Atlanta, Ga.*, as the *place* of the proposed convention, while the aforementioned action of the Association has fixed the *time* at 10 A. M. Friday, May 2d, 1879. It is earnestly hoped that the delegates from all "regularly organized and accredited medical schools" in the United States will promptly meet at the above designated time and place. That the action of the convention may be definite, it is desired that each college send two delegates, with full power to act for their respective institutions—one of these delegates to be selected from the board of trustees and one from the faculty.

In general terms, the *object* of the convention is to adopt some "uniform system of instruction more in harmony with the requirements of the age." Among the questions appropriate for discussion and decision may be mentioned, "Shall all the colleges require attendance upon three regular courses of lectures during three separate years ere admitting students to become candidates for the degree of M. D.?

Is any uniform system possible in this or other things? If so, to what extent is it possible or even desirable at the present time? Each doctor in the land doubtless has in mind an ideal medical college system. But this convention cannot act upon idealities; it can only act upon that which is practicable to all honest efficient medical schools.

It is hoped that the medical press and teaching fraternity will freely and exhaustively discuss the subject matter of this convention. The doing of this at once will enable it to enter upon its labors with a complete knowledge of the facts in the case.

To avoid misconception, let it be distinctly noticed that, although this convention is called by the "American Medical College Association," it is entirely distinct from that body. When assembled, the convention will elect its own officers and adopt its own methods for transacting its business in pursuance with the object of the call.

Nathan S. Davis, M. D.,
Acting Pres. of the Am. Med. Col. Ass.

Leartus Connor, M. D., Secy., Detroit, Mich.
February 6th, 1879.

Editorial.

It is manifest to every one that a publication that has its composing room and press room a mile apart, must labor under very great disadvantages. From one cause or another, delays will occur from circumstances that it was impossible to foresee or overcome. To obviate this, we have added to our establishment a steam engine and a large Hoe cylinder press. After the issue of the May number, we expect that the JOURNAL will be punctually on time.

It will be noticed that the JOURNAL does not contain the usual 128 pages. The lateness of this issue compels us to leave out a large amount of interesting reading matter, among which is a correspondence of Dr. Frank H. Hamilton; contributions from Dr. Andrews of Chicago, and from Dr. Geo. M. Beard, of New York etc.; we are also compelled to delay until the next issue quite a number of book reviews, book notices, etc.

The American Medical Association meets in Atlanta, Ga., on the 6th of May. It is expected that there will be a large attendance.

MISSOURI STATE MEDICAL ASSOCIATION.

The Medical Association of the State of Missouri will hold its next annual meeting at Columbia, Mo., May 20th, 1879, at 10 A. M.

The change of *place* has been rendered necessary as the Association could not be entertained at Sweet Springs at the time appointed by the By-laws.

Indications already point to a large and interesting session.

P. S.—Members on arriving at Columbia will at once report at Garth Hall, Broadway. A. J. STEELE, Cor. Sec'y.

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in the night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by 2, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—FEBRUARY, 1879.

Day of Month	Minimum.	Maximum.	Day of Month.	Minimum.	Maximum.
1	26.0	32.0	18	21.0	31.0
2	22.0	39.0	19	26.0	40.0
3	31.0	39.0	20	21.0	35.5
4	33.5	44.0	21	27.0	43.0
5	31.5	33.0	22	37.0	49.0
6	29.0	36.0	23	33.0	46.5
7	26.0	40.5	24	38.0	**58.0**
8	29.0	48.0	25	40.0	54.0
9	28.5	44.0	26	10.0	21.0
10	38.0	53.5	27	12.0	31.0
11	37.0	43.0	28	30.0	55.0
12	23.0	34.5	29		
13	11.0	18.0	30		
14	**4.0**	18.0	31		
15	13.0	35 0			
16	29.0	37.0	Means	26.4	39.0
17	32.0	34.0	Monthly Mean	32.7	

Quantity of rain 1.56 inches.

ERRATA: The maximum in December, 1878, was —1.0 deg. on the 24th
" " " January, 1879, was —10.5 degs. on the 3rd.

MORTALITY REPORT.---CITY OF ST. LOUIS.

FROM JAN. 26, 1879, TO FEB. 22, 1879, INCLUSIVE.

Septicæmia	Cholera Infantum. 1	Hydrocephalus and	Apoplexy 5
Measles	Inanition, Want of	Tubercular Men-	Cyanosis and At-
Syphilis, Cong'al.. 2	Breast Milk, etc.29	ingitis 2	electasis 2
Scarlatina 2	Alcoholism..... 1	Meningitis and En-	Premature and Pre-
Pyæmia 2	Rheumatism and	cephalitis..... 7	ternatural Birth..15
Erysipelas..... 8	Gout..... 5	All Diseases of the	Surgical Operat'ns.
Diphtheria 8	Cancer 9	Brain and Ner-	Deaths by Suicide.. 1
MembranousCroup10	Phthisis Pulmon..71	vous System 21	Deaths by Accid'nt. 7
Whooping Cough.. 1	Bronchitis.....24	Cirrhosis of Liver	
Gangrene..... 1	Pleuritis.....	and Hepatitis .. 9	Total Deaths from
Typhoid Fever.... 7	Pneumonia 66	Enteritis, Gastro-	all Causes.....436
Cerebro Spinal Fe. 1	Heart Diseases....17	Enteritis, Peri-	Total Zymotic Dis-
Remittent, Inter-	Other Diseases of	tonitis, and Gas-	eases.....107
mittent, Typho-	Respir'y Organs22	tritis.....12	Total Constitution-
Malarial, Con-	Entero-Colitis 27	Bright's Disease	al Diseases..... 97
gestive and Sim-	Marasmus — Tabes	and Nephritis ... 4	Total Local Dis-
ple Continued	Mesenterica and	Other Diseases of	eases.....207
Fevers.....12	Scrofula 9	Urinary Organs. 2	Total Develop'tal
Puerperal Disea's 13	Convulsions 18	Chronic lead pois-	Diseases 17
Diarrhœal " 10	Aneurism	oning.....	Deaths by Viol'ce. 8

CHAS. W. FRANCIS, *Health Commissioner.*

DEATHS AND RATE OF MORTALITY

Per 1000 Inhabitants, Annually, in the Largest American and Foreign Cities, According to the Latest Returns.

CITIES.	Population.	Date of Return.	Deaths from all Causes.	Annual Death Rate per 1000	Deaths.	
					Infants under 1 Year of Age.	Persons Aged 60 Y'rs and upwards.
New York	1,086,000	5 weeks ending Feb 22	2,929	28.01	.....	.....
Philadelphia	877,500	4 " " Mar 1	1,363	20.12	.....	.....
Brooklyn	549,500	4 " " " 1	859	20.50	.....	.....
St. Louis	503,000	4 " " Feb 22	436	11.07	.....	.....
Chicago	460,000	Month of February	535	14.85	.....	.....
Baltimore	355,000	4 weeks ending Mar 1	570	20.80	.....	.....
Boston	353,000	4 " " " 1	596	21.95	.....	.....
San Francisco, Cal.	300,000	Month of January	463	18.28	.....	.....
Cincinnati	280,000	4 weeks ending Mar 1	409	19.23	.....	.....
New Orleans	210,000	4 weeks ending Mar 2	353	21.36	.....	.....
Buffalo	170,000	.....	....	.....	.....	.....
Cleveland	162,000	2 weeks ending Feb 8	81	13.00	.....	.....
Washington, D. C.	160,000	Month of January	374	27.37	.....	.....
Pittsburgh	145,000	" " February	225	20.13	.....	.....
Newark	126,000	2 mos. ending Mar 31	600	29.23	.....	.....
Detroit	125,000	.....	....	.....	.....	.....
Milwaukee, Wis.	123,600	Months Nov. and Dec.	277	13.40	.....	.....
Richmond Va.	79,000	Month of February	129	25.88	.....	.....
New Haven, Conn	60,000	" " "	85	18.25	.....	.....
Charleston	57,000	4 weeks ending Mar 1	108	24.68	.....	.....
Memphis, Tenn.	50,000	.....	....	.....	.....	.....
Mobile	40,000	.....	....	.....	.....	.....
Denver		.....	....	.....	.....	.....
Galveston		.....	....	.....	.....	.....
Indianapolis		.....	....	.....	.....	.....
Springfield, Mass.	31,500	.....	....	.....	.....	.....
Nashville, Tenn.	27,000	Month of February	54	23.91	.....	.....
Sacramento	25,000	.....	....	.....	.....	.....
St. Paul, Minn.	20,000	.....	....	.....	.....	.....
London	3,577,304	February 9 to 15	1,646	23.70	.....	.....
Paris	1,988,806	" 8 to 14	1,019	26.60	.....	.....
Berlin	1,019,620	Jan 26 to Feb 1	503	24.90	.....	.....
Vienna	727,271	February 2 to 8	373	26.30	.....	.....
St. Petersburgh	869,741	Jan 26 to Feb 1	665	51.30	.....	.....
Bombay	644,405	January 1 to 7	487	31.00	.....	.....
Glasgow	566,940	February 9 to 15	295	25.80	.....	.....
Liverpool	532,681	" 9 to 15	367	35.60	.....	.....
Naples	475,407	December 10 to 16	277	31.60	.....	.....
Calcutta	429,535	Dec 29 to Jan 4	409	49.60	.....	.....
Hamburg	406,104	February 2 to 8	217	27.00	.....	.....
Birmingham	383,117	February 9 to 15	192	25,80	.....	.....
Brussels	175,785	" 9 to 15	196	26 60	.....	.....
Manchester	360,514	" 9 to 15	281	40.50	.....	.....
Dublin	314,066	" 9 to 15	337	55.90	.....	.....
Leeds	304,918	" 9 to 15	148	24.80	.....	.....
Amsterdam	302,266	" 2 to 8	172	29.01	.....	.....
Sheffield	289,537	" 9 to 15	125	21.90	.....	.....
Rome	286,400	Dec 29 to Jan 4	94	16.70	.....	.....
Turin	227,846	Jan 26 to Feb 1	109	20.80	.....	.....
Alexandria	212,031	" 26 to " 1	149	36.50	.....	.....
Breslau	167,000	February 2 to 8	141	27.20	.....	.....
Edinburgh	122,371	" 9 to 15	103	23.70	.....	.....
Dresden	207,845	" 2 to 8	90	22.00	.....	.....
Bradford	185,088	" 9 to 15	79	21.60	.....	.....
Salford	170,251	" 9 to 15	110	32.30	.....	.....
Nottingham	165,267	.....	....	.....	.....	.....
Hull	143,139	February 9 to 15	59	21.00	.....	.....
Dundee	142,957	.....	....	....	.....	.....
Portsmouth	129,461	.....	....	.....	.....	.....
Leicester	121,173	.....	....	.....	.....	.....
Oldham	107,366	.....	....	.....	.....	.....
Brighton	103,923	.....	....	.....	.....	.....

Trommer's Extract of Malt.

The rapidly increasing demand for our IMPROVED EXTRACT OF MALT, during the four years that it has been manufactured and offered to the medical profession in America, justifies the belief that in its production here we are meeting a generally felt want.

Long experience in manufacturing Malt Extract has enabled us to completely overcome the many difficulties attending its manufacture in large quantity; and we positively assure the profession that our Extract of Malt is not only perfectly pure and reliable, but that it will keep for years, in any climate, without fermenting or molding, and that its flavor actually improves by age. Our Extract is guaranteed to equal, in every respect, the best German make, while, by avoiding the expenses of importation, it is afforded at less than half the price of the foreign article.

The Malt from which it is made, is obtained by carefully malting the very best quality of selected Toronto Canada Barley. The Extract is prepared by an improved process, which prevents injury to its properties or flavor by excess of heat **It represents the soluble constituents of Malt and Hops,** viz: Malt Sugar, Dextrine, Diastase, Resin and Bitter of Hops, Phosphates of Lime and Magnesia, and Alkaline Salts.

Attention is invited to the following analysis of this Extract, as given by S. H. Douglas, Professor of Chemistry, University of Michigan, Ann Arbor.

TROMMER EXTRACT OF MALT CO:—I enclose herewith my analysis of your Extract of Malt:

Malt Sugar, 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.469; Ash—Phosphates, 1.712; Alkalies, .377; Water, 25 7 Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœia, as given by Hager, that has been so generally received by the profession, I find it to substantially agree with that article

Yours truly, SILAS H. DOUGLAS,
Prof. of Analytical and Applied Chemistry.

This invaluable preparation is highly recommended by the medical profession, as a most effective therapeutic agent, for the restoration of delicate and exhausted constitutions. It is very nutritious, being rich in both muscle and fat producing materials.

The very large proportion of Diastase renders it most effective in those forms of disease originating in imperfect digestion of the starchy elements of food.

A single dose of the Improved Trommer's Extract of Malt, contains a larger quantity of the active properties of Malt, than a pint of the best ale or porter; and not having undergone fermentation, is absolutely free from alcohol and carbonic acid.

The dose of adults is from a dessert to a tablespoonful three times daily. It is best taken after meals, pure, or mixed with a glass of milk, or in water, wine, or any kind of spirituous liquor. Each bottle contains 1 1-2 lbs of the Extract.

Our preparations of Malt are for sale by druggists generally throughout the United States and Canadas, at the following prices:

EXTRACT	OF	MALT,	With	*Hops (Plain)*,	$1.00
"	"	"	"	*Pyrophosphate of Iron (Ferrated)*..	1.00
"	"	"	"	*Cod Liver Oil*..	1.00
"	"	"	"	*Cod Liver Oil and Iodide of Iron*..	1.00
"	"	"	"	*Cod Liver Oil and Phosphorus*..	1.00
"	"	"	"	*Hypophosphites*..	1.50
"	"	"	"	*Iodides*..	1.50
"	"	"	"	*Alteratives*..	1.50
"	"	"	"	*Citrate of Iron and Quinia*..	1.50
"	"	"	"	*Pepsin*..	1.50

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TROMMER EXTRACT OF MALT CO.,

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☞In Corresponding with Advertisers please mention **The Medical Journal**

THE BEST IN THE MARKET.

PARKE, DAVIS & CO.'S

IMPROVED

EMPTY CAPSULES.

Our Capsules are manufactured by means of improved apparatus, producing the most accurate and unvarying results. The gelatine employed is of the finest quality, which, in our hands, undergoes a certain process, increasing its transparency and elasticity. Through these improvements in apparatus and material, we are enabled to produce capsules which are uniformly accurate, transparent, elastic and permanent, in which properties they are *excelled by none sold in the United States or Europe.*

These little articles will be found of great value and convenience in the hands of the physician who studies to remove the objectionable properties of the medicines which he deems it necessary to employ.

Many drugs, among which we may note *roots, gums, emetics, capsicum, etc.*, which—either from the more immediate effect to be produced, or from some special action to be desired—the physician proposes to administer in the *crude* or *powdered* state, in preference to any form of preparation, are practically debarred from use in certain cases on account of their properties (appearance, odor, taste), and the difficulty experienced in swallowing them. It is frequently advisable to conceal from the patient the nature or identity of the drug, because of some idiosyncrasy, or of his imagination with regard to its peculiar effects on his system.

To be able to easily disguise these features of a remedy at the bedside of a patient, at a time and place when he cannot employ the assistance of a pharmacist, is a great desideratum to the practitioner.

Our Capsules will fully supply this want; a few trials will demonstrate all their advantages, among which we may enumerate the following:

Convenience.—A box (100 capsules) can be carried in the pocket without inconvenience, ready for use as desired. They may be filled with the medicine in a moment, thoroughly disguising its appearance, odor and taste, and are easily swallowed, thus gaining, if we may use the phrase, a foothold in the stomach for the drug, which would have been quickly rejected by the patient in its undisguised state.

Solubility.—We have endeavored to so *prepare our gelatine* that it will quickly dissolve under the combined action of the *warmth* and *moisture* of the stomach, requiring but little digestive action, and as a result, *our capsules can be employed in dyspepsia and other forms of irritable or torpid stomach*, when this propety is essential.

Therapeutical Effect.—The gelatine having become dissolved, the remedy is brought into contact with the surface of the stomach *under the most favorable circumstances*, and, if the case will permit, will soon be assimilated, and the desired results achieved.

Emetics are exhibited in capsules to great advantage, and quick returns may be confidently expected. In this respect capsules are in contrast to pills, which, from their form and constituents, gradually dissolve in the stomach, producing the effects desired from narcotics, tonics, etc., while they are not dissolved rapidly enough for the use to which powerful emetics are devoted.

Administration.—Capsules, can, of course, be applied to the administration of any class of medicines, either simple or in combination; yet they are especially designed for facilitating the act of swallowing such articles as *powdered roots* and *gums* (which, from their insoluble or glutinous nature, are liable to linger in the mouth too long), or for disguising the taste of *quinine, morphine, capsicum, oils, fluids* and *solid extracts, etc.*

Our Capsules are put up in neat sliding paper boxes, containing 100 each, for which we charge fifty cents each. *We will mail a box to any address on receipt of the price and three cents postage.*

Parke, Davis & Co.,

Send stamps for a sample. **DETROIT, MICH.**

If you desire to procure any of our New Remedies, send for same to **Arthur Peter & Co., R. A. Robinson & Co., Louisville; Wm. Litterer & Co., Nashville; R. Macready & Co., Reakirt, Hale & Co., Rauchfuss, Egner & Co., C. A. Nulsen & Co.** and **C. E. Potts & Co., Cincinnati; Richardson & Co., Meyer Bros. & Co., A. A. Mellier, Jacob S. Merrill,** and **G. K. Hopkins & Co., St. Louis,** specifying **"P. D. & Co's"** in all cases, by so doing you will ensure reliable preparations of the **true drugs.**

FEBRUARY 15TH, 1879.

Interesting Case of Aphasia and Agraphia. Read by Chas. W. Stevens, M. D.

Among the interesting subjects now engaging the attention of the physiologist and the pathologist, that of *aphasia* is one which presents such peculiar features, as at once to enlist the most earnest efforts of the student of neuro-pathology in an attempt to solve the mystery of its phenomena. The term itself may be understood as only the name of a symptom pointing to some morbid condition, the result of some lesion, which has occurred in the brain substance. By its derivation, *a*, privative, and *phasis*, speech, it indicates simply a state of an individual without speech; but as used in reference to physicial or psychical states, it means a great deal more. By common consent, the term is applied to cases where the idea of language as expressive of what is passing in the mind, is lost; one in complete aphasia, has no more the power to express his thoughts by words, than if he had never seen, heard, or learned anything known as written or spoken language. It is not loss of will power, it is not paralysis of the muscles used in vocalization, it is not loss of the memory of words. Our object however, at the present time, is not to enter into a discussion of what really constitutes the distinctive features of aphasia, but to present an example, which in my view is one characterized by its most unmistakable and uncomplicated manifestations. Neither is the question of cerebral localizations the one now before us, but I think the case is one, which if it could have been utilized for scientific inquiry, would have furnished very strong support to this doctrine. I am of the opinion that there were in the case before us, *lesions* of the brain cortex produced by obliteration of arterial branches supplying certain portions of the brain. As Charcot says, "in that large field that experimentation tends to place the famous motor centers; it is there also that clinical experience, aided by pathological anatomy, has located the faculty of articulate language."

On the 13th of March, 1873, Mr. Wm. T. Bevin, of this city, an architect and builder, while walking upon Clark avenue suddenly fell to the pavement, and was found perfectly unconscious, helpless and comatose. In this condition he was taken to his home, through the kindness of Dr. Mudd, who was passing in his buggy at the time. He was about thirty years of age, a widower, his wife having died about two years before his misfortune. He was strictly temperate, regular, domestic in his habits, industrious and attentive to business, and was regarded as a man of excellent character and reputation. His family

physician had discovered and had treated him for valvular disease of the heart. After he was stricken down, he was attended by Drs. Mudd and Benhendorf, who visited him together for about six weeks. Dr. Benhendorf, as the family physician continuing, and on Dr. B. having occasion to leave the city for a time, Dr. Sylvester Nidelet, a near neighbor, took charge of and continued to visit him professionally till the return of the regular physician, and afterwards as a friend until the time of his death. The physicians above mentioned are the only ones who attended him professionally. Dr. Hughes saw Mr. Bevin first in February, 1876, and made two visits subsequently; this was nearly three years after the apoplectic attack. I also saw him first about this time, and continued to visit him; first to learn his mental and physicial condition, with reference to an anticipated lawsuit, and afterwards till near the time of his death, (which took place in January of the present year) as interest, curiosity, or friendship prompted me. The visits by Dr. Hughes and myself, were made at the solicitation of persons who were directly and indirectly interested in the civil suit above alluded to, and which was then pending. We were afterwards called upon to testify as expert witnesses. Dr. Bauduy was also called to the stand, though he had never made a personal examination. Early in July, 1873, or about four months after the first seizure, certain parties claimed that Bevin had agreed to advance $5,000 as part payment in the erection of some tenement houses (although no contract in writing appeared). These parties consulted Mr. Jackson, a brother-in-law, and Mrs. Jackson, a sister of Bevin, and were told by those that their brother was not competent to attend to any business. They then called upon Dr. Nidelet, who promptly told them the same thing. They persisted, however, and through the influence of a brother of Bevins', who was to receive three per cent. of the amount on commission, the patient was persuaded to sign his name to notes to the amount of $5,000, and also to a deed of trust to secure the same. This occurred on the 15th of July, 1873. Upon these papers, the parties succeeded in negotiating a loan from a Mr. McManus, the money never coming in any way under the control of Mr. Bevin or his friends. The suit was then brought upon these notes, and payment was resisted on the ground of the party being *non compos mentis* at the time of the signing.

The case was first tried in 1876, but through some informality, of which I am not informed, a new trial was instituted, which came up in the early part of 1878. In this trial able counsel were engaged on both sides. On the part of the plaintiff appeared Gen. Shields and Gen. John B. Henderson, and for the defense, attorneys Scott and Rainey. A large number of witnesses were examined, the case occupying the court for three days. The three physicians who had attended the patient professionally, testified to a belief in mental impairment to such

an extent, as to incapacitate the man from exercising proper judgment and discretion at the time in which this financial transaction occurred, viz., four months after the paroxysm. These gentlemen were allowed to give opinions as experts, and men justly entitled to that latitude. Several members of the family, relations of the defendant, a gentleman who was often a visitor, and was an intimate friend, and also a priest who visited him regularly; all, in fact, who had had opportunities of regular observation, corroborated the opinion given by the attending physicians. For my own part, I testified unqualifiedly to a state of unsoundness or weakness of the reasoning faculty, approximating imbecility; this opinion being formed in part from the testimony presented, and my reasons for my opinion I state as follows: First, that the man's many acts, indicating at times a degree of childishness, carelessness, indifference and petulance, not at all consistent with his former record, by which it was shown he had been a man of considerable education, taste and refinement.

Again, from the nature of the tremendous shock his brain and nervous system had received, I believe it next to an impossibility that in the short space of four months he could regain his normal mental condition. And again, from the fact that, even during the entire time covered by the financial transaction, he had not manifested the least concern, anxiety or interest in his occupation. If he had been capable of reflection would he not have manifested some emotion, at least in regard to matters over which he had been accustomed to exercise control? In this, then, is conclusive evidence of a change in his mental state; that of itself, as it seems to me, should convince any unprejudiced person that he was incapable of properly reasoning upon the circumstances and conditions of so important an affair as the one in question. Great and persistent efforts were made by the plaintiffs' attorneys to make the mental condition appear as one of a *pronounced type* of insanity, or that otherwise it was nothing; and their expert witnesses, though they urged the plea with becoming modesty, expatiated upon delusion, delirium and hallucination, seeming to overlook the fact that in dementia, imbecility, melancholia and idiocy, there is, in the majority of examples, an absence of these states. No one, I think, on the part of the defense, testified without qualifications, to anything like mania or delusional insanity.

The testimony and opinions of Drs. Hughes and Bauduy, I regarded on the whole as exceedingly conservative, and even in many respects fully as favorable for the defendants as for the plaintiff. Their statement upon the point of mental impairment amounted to this, that though the individual was not competent to transact any *new business*, he was capable of comprehending as much as was necessary in a matter which had occupied his attention previous to the apoplectic attack. But I immediately

asked myself the question, why, then, has he not manifested some interest, anxiety or concern about the several matters which were thrown into confusion by his sudden and unexpected separation from their control. It was proved fully that he had not; and I have no doubt that every juror reasoned in the same manner as I did on this candid, and, for the plaintiff's cause, very damaging admission.

The case was given to the jurors, and under the instructions of the court, they could only decide that Mr. Bevin was *non compos mentis* at the time of signing the notes and deed of trust.

Thus ended this singular suit in which astute lawyers searchingly interrogated us, and I think asked us very many questions they could not answer themselves; but this is their privilege. They certainly ventilated pretty thoroughly our knowledge of aphasia, aphonia, agraphia, amnesia, thrombosis, embolism, the anatomy of the third convolution, the island of Reil, the middle cerebral centers, etc.

I heartily sympathize with the jurors, who seemed to sit in blank astonishment during this brilliant display of judicial and metaphysical pyrotechnics.

It may not be unprofitable now to take a view of this case, separating it from legal connections, and to examine it in the light of facts and theories; though to do full justice to the questions which might arise would require a vast amount more of time and study than I can now give. Mr. Bevin was stricken down with cerebral apoplexy in the month of March, 1873, entirely comatose and unconscious. As the coma passed off, he was found with complete right hemiplegia, and perfectly aphasic; as time passed, and as is usual to be expected in such cases, by the efforts of the *vis medicatrix naturæ*, we find the muscles partially regaining their function. The limit of restoration was reached in the course of about one year. The hand and arm remained entirely useless; the lower member so far recovered that he was able to walk with the use of a cane; for a time there was scarcely any indication of a remnant of mentality; he recognized no one; did not make known his wants, even in the smallest matters, not even in relation to the calls of nature; from this condition he began to slowly improve; what the limits of that improvement was, and at what period of his history it reached its maximum, I am unable to say; but from all the facts I have learned, I would say that at least one year must have elapsed before his mind was ordinarily clear. This, however, would be a very difficult point to determine, because he could only communicate by signs. I saw him for the first time over three years after his attack, and many times subsequently, and from all the indications and manifestations on his part, I was convinced that he fully comprehended all that was said to him. I called upon him very frequently and had full opportunity to test his mental ability.

Mr. Bevin's case, as an example of aphasia, was in my opinion as complete as any on record. From the time of the stroke to the time of his death, a period of nearly six years, he did not speak one word conveying an idea; the vocal sound was never heard except in the ejaculation, "nin-nin," and in laughing. His case also was one of agraphia, a loss of ability to communicate ideas by written language. Persistent efforts were made to teach him to speak, but all without avail; and only a little better success resulted from long continued labor in teaching him to communicate by writing. Through the efforts of his sister, but mostly those of his niece, a girl twelve years of age, he first learned to copy the alphabet and in this was tolerably successful. He was then instructed to write his name, and for more than two years, this was the only word he could write without a copy. In 1876 and further on, he made a little progress, and was able, independent of copy, to write a few other names. He would try to form sentences sometimes, but failed.

How are we to account for the phenomena developed in this case? I believe there is a perfect unanimity of opinion among the physicians who have been directly or indirectly connected with it in their diagnosis, which was that the valvular disease of the heart gave rise to embolism, which found its way to the left middle cerebral or sylvian artery, resulting or causing apoplexy. The theory which I think is now generally adopted is, that the clot entering certain branches, cuts off—obliterates the circulation in the third convolution—the convolution of Broca, and may involve other structures. In this part of the brain are located the motor centers of the arm and lower extremities. In this instance these centers, with the speech center, were involved. The obliteration of the ramifications and arborizations of this artery by embolism, was the principal or efficient cause of all the physical, psychical and pathological phenomena.

Important additions have recently been made to the literature of this most interesting subject of cerebral localization. Charcot says, "The question of cerebral localization has entered a new phase, and is now enlisting world-wide attention. The encephalon does not represent an homogeneous organ, a unit, but rather an association, or a confederation, composed of a certain number of diverse organs. To each one of these organs belong distinct physiological properties, functions and faculties."

DISCUSSION.

Dr. Hughes:—I wish to make one correction in regard to the statement made in the paper just read, that Dr. Bandny and myself admitted that the man was incompetent to do many rational acts. I did not hear all of Dr. Bandny's testimony, and I do not know what position he took upon that subject. I certainly made no such admission. The subject of aphasia is certainly one of the most interesting subjects that can engage the attention of physicians, and of much importance from a medico-legal standpoint, and in regard to the case of Mr. Bevin, I will read a few sentences from an article of mine in the *American Journal of Insanity*, for 1876. These were the conclusions: First, the paralysis alone was sufficient to account for most of his acts, his improvement and gradual recovery for the remainder; he being now (May 17th, when this was written) sound in mind and able to go about, with no affection save the aphasia. Second, because the lesion was one involving but a portion of the hemisphere of the brain. Atrophy or the destruction of the whole hemisphere, especially, if gradually brought about, not even necessitating mental disease, the sound hemisphere being capable of vicariously supplementing the one diseased in the performance of the mental functions. Third, the gray matter, even on the affected side, seems not to have been greatly involved, as shown in the absence of incoherence, delirium, delusion, illusion or hallucination during the whole progress of the case, and the retention of memory and ability to learn for a purpose, to write his own name, and in a few months after, the stroke with his left hand. Fourth, with the absence of incoherence, delirium, delusion, etc., there was marked improvement of the face and extremities, absence of muscular twitchings in the limbs, and of rigidity of the neck and other parts of the body, which usually accompany paralytic lesions, involving also the cortex cerebri. The lesion was mainly an obstruction of the middle cerebral artery at the base of the brain, as revealed by the aphasia and gradual coming on of the paralytic attack. Fifth, the nature of the lesion with the part of the brain mainly implicated in this case, is one from which persistent intellectual aberration seldom results; the equilibrium of the disturbed cerebral circulation being soon reestablished, even when the circle of Willis is obstructed instead of the branches, as in the case before us, and lastly, for a reason which some may not deem of any weight, mainly because that portion of the brain which has to do in all probability with the highest intellection, is the posterior lobes of the cerebrum, and they are not nourished by the artery mainly concerned in the lesion before us; "a conclusion which, however contrary it may

be to generally received opinion," to use the language of Charlton Bastian, has been strengthened by observations made independently in different directions by different persons. It seems to agree moreover with clinical and pathological evidence, Dr. Hughlings Jackson and other authorities on the subject of brain disease agreeing with him.

MARCH 1ST, 1879.

Aphasia. By C. H. Hughes, M. D.

In 1808 Gall conjectured, and in 1825 Bouilland demonstrated by clinical observation, that the faculty of articulate speech was located in the anterior lobes of the brain. Less than fifty years ago, Marc Dax located the faculty of speech in the left hemisphere alone. His memoir was read before the Medical Congress of Montpelier in 1836. In 1863 his son, G. Dax, located the seat of aphasia in the anterior and outer portion of the middle lobe of the left hemisphere, "the point of union," as Trousseau observes, "of the middle with the frontal lobe—a spot very close to the island of Reil and consequently to the frontal lobe."

Two years prior to this occurred that historical discussion before the Anthropological Society of Paris, between Gratiolet, Aubertin and Broca, on the localization of cerebral function, which resulted shortly after in further clinical researches by Broca and his subsequent conversion to the doctrine of a speech center in the brain, as maintained by Aubertin on the basis of Bouilland's researches and its *more exact restriction to the posterior portion of the third left frontal convolution*, which has borne Broca's name since 1863.

Through the labors of Fritsch and Hitzig, aided by the discovery of the electric excitability of the brain, and their researches, added to those of Ferrier and Bartholow, and the clinical observations of Charcot, much light has been thrown upon many hitherto dark places in cerebral physiology and pathology, and, with the Chief of the Salpetriere, we may say, "the question of cerebral localization has entered a new phase and is now enlisting world-wide attention."

Much that was lately in the realms of conjecture has been transferred to the domain of established fact. Among those facts accomplished, stand too well attested by observation to be shaken by future discovery, that of aphasia and its location in the brain, viz: In the third frontal convolution "where it abuts on the fissure of sylvins and overlaps the island of Reil," a region shown by Ferrier to correspond with the situation of the motor centers of articulation in the monkey.

In right-handed persons, its *locus morbi* is usually, if not invariably, on the left side, while in exceptional cases of the left-handed and the ambi-dextrous, it may be in the corresponding portion of the left hemisphere.

The fact that the left side of the brain is the almost universal site of aphasic lesion has been fairly demonstrated by the recorded cases of all observers. Of these, Hammond collected 82 from various sources, and Seguin 545, to which Dr. Allan McLane Hamilton adds 8 of his own autopsies, making a sum total of 635 cases. Of these, the right hemisphere was implicated in but 33 cases (3.6 per cent). The cause of aphasia being due in nearly all cases to embolism or thrombosis, the selection of the left side for the lodgment of the clot is readily explainable by the fact that the necessarily obstructed artery, the left middle cerebral, is in a more direct line from the heart than its opposite.

The right and left frontal lobes being similar in structure and conformation, it is more than probable that a power of vicarious function resides in these regions of the brain, which sufficiently accounts for the few exceptional cases of aphasia with right sided lesion, without looking to Brown-Sequard's reflex phenomenon or Schröder Van der Kolk and the corpora olivaria for an explanation of these anomalous cases, and of the occasional recovery of speech where the left-sided lesion has persisted.

"The left hemisphere, like the right side of the body," as Hughlings Jackson has stated, "is the leading or driving side," and whether this fact be due to post natal handling and education of the child by which it is compelled to use its right hand and left brain most, or to ante-natal and inherent necessity, there exists no good reason why there should not be a duplicate speech as well as a duplicate hand center.

The phenomenal varieties of aphasia are so numerous that a confusion of names, each adopted, either for its more comprehensive or restrictive signification, confronts and confuses the faithful student of its protean forms, from the alalia of Lordat and Jaccoud, the aphemia of Broca, the aphasia of Trousseau, and the comprehensive asemasia of McLane Hamilton, to the more restrictive appellations of Ogle, Romberg and Bastian.

A study of the table of Jaccoud and such restrictive philological coinages as asynesis, laloplegia, paralalie, agraphia, echoolgia, amesic, aphasia, anemonemic and ataxic aphasia, etc., added to the above reminds us of the confusion of tongues at the Tower of Babel, and serve no other useful purpose that I know of than to turn the thoughts of medical men to a too much neglected book, in whose pages we read of "people of a deeper speech than thou canst perceive; of a stammering tongue that thou canst not understand." (Isaiah, xxxiii–19.)

Among the phenomenal varieties of aphasia, may be found every conceivable degree of failure of verbal and sign expression,

from the not uncommon failure to recall a familiar and oft repeated name, as was the case with Messala Corvinas, referred to by Pliny, who forgot his own name, the occasional substitution of wrong words, and the too common forgetfulness of intoxication, to the absolute inability to make a single intelligible sign or speech—the complete asemasia of Hamilton. One of my patients substitutes L for F and A for H.

Aphasic displays co-existing with unappreciable mental impairment are very common in the records of medicine, and if they were all collected, they would make a volume that would read stranger than fiction. Troussean has recorded a great many interesting examples, and likewise Winslow and other writers.

Some patients like Guénier and Paquet, described by Trousseau, can only write their own names or a single word in answer to questions; others, like Behiers' and Jackson's patients, can only sing, and some reverse their prayers, and say our Father which art in hell.

The casual varieties of aphasia are likewise quite numerous, the chief being cerebral embolism and softening, sanguineous extravasation, the traumatic and the psychic; under the latter I include the aphasia of the insane, and the hysterical. Aphasia may be caused also by a tumor or sclerosis of the brain, meningeal inflammation or atrophy.

Its less frequent and transitory forms are the epileptic, the hysterical, the hyperæmic, the reflex or sympathetic, and the emotional, such as the speechlessness of intense passion or fright.

The reflex form is dependent upon cerebral hyperæmia, induced by the reflected irritation of indigestion, uterine excitement, etc. There is also the aphasia of catalepsia, in which I think there is a morbid condition of the psycho-motor center for articulation as well as in the adjoining centers of motion in the brain, and persons subject to nightmare often find themselves quite aphasic while the brain is in a tumult of excitement and fear. Sometimes they succeed in making a monotonous cry, but seldom, if ever, in saying what they wish to say. I have never seen any reference to this fact in any authority.

The subject of aphasia may often acquire important medico-legal significance. The question of mental competency to do certain acts, such as the signing of powers of attorney, wills, deeds of conveyance and other important papers, may arise. A question as to the degree of concomitant mental impairment, if any, will almost invariably be raised, if important acts are performed by these patients, involving great pecuniary interests, or questions of responsibility to law. We shall to-night only consider the medico-legal phases of this interesting disease.

Aphasia, though often simple and uncomplicated, is also associated with such a degree of disease, as involves the mind in disordered action.

That the soundness of the judging and comparing faculties is

not necessarily impaired in aphasia, can not be controverted. In fact nothing has contributed more than the various phenomena of aphasia, co-existing with a sound mind, to establish that the integrity of every faculty of expression, is not essential to mental competency.

Aphasia may be associated with hemiplegia, and is most frequently so connected in its early stage, and with imbecility and advanced general paralysis of the insane and other forms of insanity, as well as with deaf-mutism, from which, of course, it must be differentiated. A recent able American writer on neurology says: "The aphasic of course may suffer an intellectual impairment, which lasts a short time after the attack. This is not necessarily accompanied by a loss of judgment. It is more a condition of mental sluggishness and it will not do to say that the individual is incompetent, while he admits that additional evidence of softening in dementia throws an entirely different light upon the matter, but even then it must be remembered aphasia is not necessarily associated with such states. [1]

This is the real point: The question of dementia or associated mental incompetency is one to be separately considered on its merits, as though no special defect existed. And Dr. Ray, says: "As those (cases) in which the faculty of language is located, might by the careless or incompetent observer be mistaken for insanity, they require a particular notice in this place (p. 174 Conts. to Mental Pathol.). It is a curious though well established fact, instances of which are related numerous enough to fill a volume, that the faculty of language or the power of representing thoughts by appropriate articulate or written signs may be utterly or partially lost, the other mental powers remaining sound." On the same page Dr. Ray refers to the case reported many years ago by Wm. Hood, in the phrenological transactions, when the patient, a blacksmith, lost the memory of all words except *yes* and *no*, while he comprehended distinctly whatever was said to him. He could not read, but could understand what was said to him, and within a few days went to his shop and attended to his workmen. He improved somewhat in his power of speech, but it remained greatly impaired up to the time of his death, three years afterwards. Ray refers to a coachman, who, after a fall on his head, could never say any word but *one*, yet his mind was perfectly sound; and to the celebrated Brousonret, who, after entire recovery from an attack of apoplexy, could never utter nor write the names of persons nor things, though other parts of speech were at his command in abundance, by which he could by various intellectual devices indicate individuals, things and wants.

Metaphysical conceptions as to what mind is or ought to be, should not be permitted to embarrass or bias our opinions in

1. Allan McLane Hamilton, Nervous Diseases, 1878.

passing judgment upon the extent to which a particular degree of aphasia may compromise mentality in any particular case.

This fault was committed by the great Trosseau, who left the profession a legacy of error on the subject we are considering, in these words: "The intellect of an aphasic patient is forever damaged, just as the motility of one-half of his body is impaired, and he will always be lame mentally,"[1] from the baneful consequences of which medicine has not yet fully recovered, though they are in striking contrast with later teachings, as expressed in language like the following, which I quote from Bastian: "There are many instances on record, in which, though the aphasic condition itself has been most complete, the mental powers of the patients have been well preserved,[2] or the following from the same source: "These cases differ very much in severity, * * * partly owing to the extent and situation of the brain lesion, and partly to the period of the disease at which the patient is seen. In the gravest cases of this kind, the amount of general mental impairment is so great, that the patient's inability to speak appears only as one form of mental impairment. Such severe cases are almost invariably instances of recent hemiplegia, and the patient may in the course of two, three or more weeks, show a very notable improvement in some, or in all respects."[3]

Or the following from Ferrièr: "We have seen that a person aphasic from destruction of his speech center (as we may for shortness call the articulatory motor centers of the left hemisphere,) still remains capable of appreciating the meaning of words uttered in his hearing. In this respect he does not (and there is no reason why he should) differ from a normal individual. His centers of sight, hearing, etc., being unimpaired, he is capable, as before, of sight, auditory, tactile, gustatory and olfactory ideation.

The difference consists in the fact, that in the aphasic individual the word spoken, though it calls up the idea of meaning, cannot call up the word itself, actually, or in idea, owing to the word-execution and word-ideation being destroyed. The appreciation of the meaning of spoken words is readily accounted for by the fact, that in the process of education, an association is formed directly between certain sounds and certain objects of sense, simultaneously with, if not antecedent to the formation of the cohesive association between these sounds, and certain acts of articulation.

The cohesion or association between sound and meaning, remains unimpaired in aphasia. It is the cohesion between sound and articulation, which is broken by removal of the motor factor of the organic nlexus."[4]

1. Clin. Med. vol. 1, p. 277.
2. Paralysis from Brain Disease, p. 198.
3. Paralysis from Brain Disease, p. 192.
4. Functions of the Brain, pp. 275 and 276.

Trousseau concluded that aphasia is not merely a loss of speech but also an impairment of the understanding, in consequence of a psychological notion he acquired from Warburton and Condillac and which has since been reiterated, though somewhat modified by Bain, that words are indispensable instruments of the thought process. He inclined to the belief that ideas and words were inseparable. To use a later phraseology of psycho physiology, ideas and their representative words are indissolubly registered in consciousness, and that when words took their departure from the mind beyond recall, the ideas which they symbolized went with them. With him aphasia was always a loss of the memory of words, whereas it is the faculty of articulate speech and of symbolic expression that is lost or impaired. An incapability of verbal coördination, while, abstractly the internal memory of words, the sounds of them at least and their association with registered ideas, either remains or is readily revived, for the aphasic individual generally understands the meaning of words when he hears them plainly spoken, and hence may be able often to conduct a thought process by means of internal speech, if such speech be really necessary to the carrying on of thought. But thought, as Ferrier observes, may be carried on without language, but it is thought in particular, restricted and limited, in some cases no doubt, to the revival, revolving, blending and combining of emotions, sights, sounds, touches, taste, smell, etc., impressed upon their proper centers in the brain through such neurotic avenues of ingress thereto as may have retained their integrity. The condition of aphasia must undoubtedly be a source of great embarrassment to the thought process of most patients, especially in the beginning of the seizure. The patient's situation is to him so novel, inexplicable, and so alarming often. The range of the aphasic's intellectual operations is often of necessity abridged by reason of his crippled power of expression, especially if the aphasia be complete—without the power of speaking or writing—amnesia and agraphia. Such cases if they are not mentally deranged display their appreciation of their condition and surroundings—their good sense and sanity—by refraining from attempts at conducting themselves beyond their powers and in accordance with their changed condition and surroundings. Though they can not act as formerly they still act in harmony with their changed condition and surroundings. If not able to carry on their customary business they realize the fact and act accordingly, like the illustrious Lordat, who, when stricken, very sensibly did not insist on lecturing as was his wont. They realize the real affliction and reveal this knowledge of themselves in a rational manner.

Lordat's case is worth adverting to since the Doctor used to refer to his own personal experience in illustration of his view that the mind was not impaired in consequence of the

verbal incoördination of aphasia. Lordat said he could think, coördinate a lecture or change its arrangement in his own mind, but was unable, though not paralyzed, to express his thoughts in speaking or writing. "I thought," says he, "of the christian doxology, 'Glory be to the Father, the Son and the Holy Ghost,' and I was not able to recollect a single word of it." [5]

Trousseau thinks Lordat deceived himself because it seemed to him impossible not to clothe ideas in words, and the classical lecturer on clinical medicine thought the intellect was impaired of one of his colleagues who was aphasic for a few hours only, though "he remembered well the curious phases through which his mind passed," moved his arms and tongue to ascertain that he was not paralyzed, collected his thoughts and mentally asked himself what portion of his brain could at that moment be injured. He thought his collegue's intellect was impaired, because he could not well understand a page of Lamartine's literary conversation which he was reading at the time he was stricken. That other colleague of Trousseau, who, on returning home from the Accademy of Medicine in January, 1864, was seized with vertigo and could not remember a great many names, but when the word he wanted was pronounced by another, exclaimed "that's it," and, repeating it distinctly, continued his sentence, showed plainly enough that the existing word idea had not faded from memory, but was still registered in the mind, for he still recognized the word he wanted when it was pronounced, though he could not call into activity the coördinating processes essential to its formation, until after his idea had been formulated into a word or words by another.

This is the case with a great many aphasics, especially with those whom Bastian has classed under the head of amnesia, which he calls a "kind of incoördination in the action of those higher cerebral centers, whose business it is to translate thought into the corresponding motor acts. There is an irregular carrying out in fact of those processes, by which the thought of the patient receives that physical expression which renders it intelligible to others. The individual knows what he wishes to say, but there is a defect in the subsequent molecular actions going on in his higher nerve-centers of such a nature as to cause hesitation or delay in the utterance of right words, and what is more the substitution occasionally of entirely wrong words, or even of a meaningless set of sounds in the place of those he wishes to utter.

Although such a patient may be quite unable to present these mistakes or failures, he usually shows by his manner that he is aware of having made them, and yet any attempts to rectify the errors only seems to make matters worse. This defective action in the speech-centers and their related parts is very comparable with what occurs in other nerve-centers in loco-motor ataxia. In this disease a man may have an adequate knowledge of what he

5. Trousseau's Lectures, v. 2, p. 275.

intends to do, though when he attempts to move his legs in a definite direction, he jerks them about in an irregular manner or even moves in a way the reverse of what he intended. In each case we have to do, therefore, not so much with lack of power as with involuntary or misdirected power * * * and such defects in oral speech often co-exist with more or less marked difficulties of the same kind in the translation of thought into written speech, that is, writing. The patient is then able to perform the mechanical act very well, though he cannot group letters correctly into words; he spells altogether wrongly or even uses words which have no resemblance to those he wishes to employ [6] or omits them.

Bastian gives in illustration a letter from one of Sir Wm. Jenner's patients, which, though legibly written, is verbally incomprehensible. He does not say whether his patient was insane or not, or whether he evinced any appreciation of the absurdity of his epistle; observes there was no omission of any of the necessary letters of the alphabet from any particular word and no words in the letter not to be found in the English language, but right words seem to have been employed in the wrong place and so many of them omitted as to destroy the sense entirely. In another letter given by Bastian only one word is misspelled —*thother*, for *whether*.

Dr. Ray, somewhere in his report of the Parish will case, attaches some significance to the fact that Mr. Parish could not learn to put the letters of the alphabet together so as to form intelligible words, and in his introductory remarks, refers to the fact that since it was written, the prominent feature of the case, aphasia, has been greatly investigated by various observers and that "these investigations have considerably increased our knowledge of its anatomical and pathological relations," though they have not probably thrown any new light on cases like this celebrated case. Very rational cases manifest this defect, for instance Trousseau's case M. X., who could neither put together loose letters of the alphabet nor write with his left hand; yet this patient, as Trousseau confesses, "was in full possession of his intellect."

McLane Hamilton proposes this fact as a sort of psychic test of mental integrity. "If the patient be insane," he says, "he will not admit any absurdities to which he may give expression, but with the aphasic the case is different, for he always evinces his chagrin when he finds that he has written the wrong word and endeavors to correct his mistake."[7]

This test will not always answer, though it is a valuable indication of the mental range, where agraphia does not exist. I am not sure however that it is more faultless than the verbal test,

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6. Ibid, pp. 188-189.

7. Nervous Diseases, p. 177.

which is by no means infallible, as even Trousseau concedes. I quote a case from him in illustration :

Mrs. B——, the mother-in-law of a medical man, had never been paralyzed, but labored under a very singular disorder. Whenever a visitor entered her apartment she rose with an amiable look and pointing to a chair, exclaimed, "Pig, animal, stupid fool!" "Mrs. B. asks you to take a chair," her son-in-law would then put in, giving this interpretation to her strange expressions. "In other respects," says Trousseau, "Mrs. B.'s acts were rational and her case differed from ordinary aphasia, in that she did not seem to grow impatient at what she said or to understand the meaning of the insulting expressions of which she made use." There was at the Infimary of the Salpteriere a woman of forty years of age, quite hemiplegic, and who could only say, "Madame e'te!" "Mon Dieu!" "Est it possible?" "Bon jour, Madame!" Her intelligence was perfectly preserved. Hamilton, referring to this case, which Forbes, Winslow and others have quoted from Durand Fardel, quotes Legroux in explanation as follows: "It is to be supposed in these cases that the patients speak without hearing what they say, or that their auditory receptivity is unable to reveal the imperfection of their speech."

The patient's appreciation however of the aptness of his speech or gesture, whether he has spoken rightly or wrongly, though not without exception, is a good test to be added to other evidences of mental integrity in forming a judgment in a given case. Broca's historic case possessed it, and many of the cases collected and recorded before and since. But the very best and only satisfactory test of sanity in aphasic persons consists in ascertaining the manner in which he conducts himself with reference to his changed surroundings. The range of an aphasic's intellectual operations may be, and often is limited by his affliction. If he properly appreciates the extent of his affliction and changed surroundings and comports himself in harmony with them, he is not insane.

When Andrew Combe, in 1830, propounded his definiton that "insanity is a prolonged departure without adequate external cause, from the state of feeling and the mode of thinking usual to the individual in good health," he had heard but little of aphasia, which furnishes an adequate internal cause for a change in the habit of thought of most aphasics, for they most often reconcile themselves to think in a measure and act as the mutes do, by the reviving and employing of mental images of form, size, weight, color, taste, touch and smell of objects, but in addition they have some images registered in consciousness before ever they learned to speak, most of which they never forget when they hear them repeated, and one or more of which they never forget how to reproduce.

DISCUSSION.

Dr. Montgomery:—These peculiar involvements of the brain are exceedingly interesting to me just now, because I have received a letter to-day from a brother in Ireland, eight years younger, who is at present affected with the very same symptoms with which I was three years since. He is Principal of the Belfast Medical College, and a very eloquent speaker, very industrious and persevering and performs a great amount of mental labor; and in addition to his other duties, preaches three times on Sunday, twice during the week, and lectures six times a week. He has a wife and ten children. The strain to which his mental faculties have been so long subjected, at length resulted in the terrible condition into which he lapsed about a year ago. His attacks commenced with a violent headache, the pain being confined to one spot. After a while loss of memory supervened; he would forget to-day what he had done yesterday, and in speaking, although he was naturally eloquent, he sometimes could not remember words. He became paralyzed, as I was, on the right side. To-day I received from him the first letter for four or five months. He was attacked in the night with a severe pain; his skin was very dry; he could not perspire; his appetite was very regular; finally he became hemiplegic and lost his memory completely. He had been generally very healthy. I have no doubt that anxiety of mind and mental strain induced these symptoms. He writes me that he has been taking strychnia, quinine, iron, phosphate of zinc and phosphorus in different forms. He was attended by Dr. Brown and another physician whose name I do not recollect. He is now very much improved and able to write, although his writing is very inferior to what it was in former times. I mention the case as it is singular that he should be affected in the same way that I was myself, and that he should be benefitted by taking the same medicines that I did. When I was at the Hot Springs, during my attack, I remember that I had forgotten entirely all that I had done for some time previously; I could not walk without assistance and was very much paralyzed, especially in the right side; also had that same peculiar condition of the skin—neither liquor ammonia acetatis, nor other diaphoretics would induce perspiration; the vapor baths alone were effectual; under their use I improved rapidly.

I do not believe that the virtues of the Hot Springs depend upon the medicinal qualities of the water, but there is no doubt that that water is superior to anything else for the affections of the brain and nervous system. When I first reached the Springs, I could not walk at all, but after three weeks I could climb one of those high mountains in the vicinity, three times a day. I

Trommer Extract of Malt Co.

FREMONT, OHIO.

FREMONT, Ohio, April, 1878.

DEAR SIR:—

It is now five years since we first introduced and began the manufacture of Extract of Malt in the United States. It has been our aim to furnish the medical profession in America with a malt-extract equal to the best German make, and (by saving the expenses of importation), much cheaper than the foreign article can be afforded. For the manner in which our efforts have been appreciated by the medical profession, we desire to express our warmest thanks.

The difficulties attending the manufacture of Extract of Malt in large quantities, can be overcome only by that kind of skill which is acquired by experience. Its constituents must receive no injury by the process, and good flavor and keeping quality, adapting it to all climates, must characterize the product. All are familiar with the striking difference between certain celebrated brands of ale and porter—and yet the poorest as well as the best, is, or should be, produced from barley malt and hops. Success greatly depends, of course, upon the employment of none but the best material; but it is by the use of specific and long-tried procedures that results are obtained which are so difficult to rival.

We do ourselves but simple justice, in stating that our *entire attention* is, and for many years has been, *exclusively* devoted to the manufacture of Extract of Malt for medicinal purposes, and that we give our undivided personal attention to each step in the delicate process by which Extract of Malt of excellent quality can alone be made.

Under these circumstances, it is unreasonable to suppose that the various manufacturers of fluid extracts, elixirs, pills, etc., (who attracted by the high reputation of our Etract of Malt), have recently in various sections of the country, undertaken the manufacture of a similar article, should generally succeed in producing it of a quality according to the fulsome praise with which their advertisements are filled. While being perfectly willing to let the reputation of our Extract of Malt rest upon its real merits, we owe it to the medical profession, as well as to ourselves, to give warning against imposition.

It has come to our knowledge that certain articles extensively advertised as "pure" and "genuine extract of malt," are composed chiefly of the substance called GRAPE SUGAR or MALTINE, which, as is well-known, is the product of the action of sulphuric acid upon starch subjected to a high temperature. This artificial grape sugar or glucose, which is extensively manufactured from corn starch, is now being used in immense quantities, instead of ordinary cane sugar, in the sophistication of confectionery sugar house syrup, "strained honey" native wines, and canned fruits, and by some brewers in the manufacture of beer and ale. The cheapness of this artificial product of Indian corn, constitutes the chief inducement for this species of substitution for barley malt and sugar cane.

Again, an extract of malted grain is manufactured for the purpose of obtaining *diastase*, which, (simple and variously combined) is much used in medicine. The appearance of the extract is but slightly changed by being deprived of this important constituent, although, it is unnecessary to add, that its value as a medicinal agent is thereby greatly impaired. Nevertheless, this very substance, which is little more than refuse material, in the manufacture of diastase, is now being offered for pure malt extract.

It is *malt extract* prepared from barley malt combined with the proper proportion of hops, that has been for many years the standard medicinal nutritive employed by the medical faculty of Europe, and especially of Germany. Its value has been established by experience, and its use in the treatment of almost all forms of disease of nutrition is constantly extending. We shall continue to devote the most scrupulous attention to the maintenance of the reputation of our malt extract, by the careful selection of material and by unwearied personal attention to manufacturing details.

Attention is respectfully directed to the accompanying extract from Ziemssen, and also to our cirlcular and testimonials elsewhere printed.

Very respectfully,
TROMMER EXTRACT OF MALT CO.

FROM ZIEMSSEN'S CYCLOPÆDIA OF THE PRACTICE OF MEDICINE, VOL. XVI, PAGE 474:

"The Malt Extract prepared from Trommer's receipt is designed to fulfill much the same purpose as cod-liver oil, carbo-hydrates (malt sugar, dextrine), taking the place of fatty matter. The simple (much or little hopped) and the chalybeate form of Malt Extract are coming more and more into favor as substitutes for the oil; they are more palatable and more easily digested, and should, therefore, be preferred in the dyspeptic forms of anæmia. During the last few years Malt Extract has almost entirely taken the place of cod liver oil in the treatment of phthisis, and other wasting diseases at the Basle Hospital, and we have as yet found no reason for returning to the use of the latter remedy. The Extract may be given from one to three times a day in doses varying from a teaspoonful to a tablespoonful in milk. broth, beer or wine."

Saccharated Chloro-Pepsine

The Best Remedy for Nausea and Vomiting in all forms,

ESPECIALLY OF PREGNANCY, INDIGESTION & DYSPEPSIA,

ALL FORMS OF GASTRIC DERANGEMENT, ATONIC DIARRHŒA, INDIGESTION—DIARRHŒA OF CHILDREN, Etc., Etc.

Vomiting in General is a reflex act due to an irritation either within the stomach—whether the irritant be introduced as such, or the irritation proceeds from over-distension of the organ or fermentation, decomposition of food—or without the stomach, the sympathetic variety.

Vomiting of Pregnancy is an example of the latter part.

A supply of *pure* pepsine, or any or all the gastro-intestinal digestive principles, fails to remedy the trouble. Why? Simply because this *functional derangement* of the GASTRIC SYMPATHETIC SET OF NERVES *requires that the remedial agent shall be especially addressed to this portion of the nervous system.*

Realizing this fact, I have prepared a compound **SACCHARATED CHLORO-PEPSINE,** in strict harmony with the pathological indications to be met, as may be attested by a perusal of the formula given below.

The Indigestions.—Indigestion, when due to deficiencies of gastric secretion, atony, or hyperæsthesia, always demands an artificial aid to digestion, in addition to regulation of diet. Pure saccharated pepsine has been used until lately; now, however, it is further reduced in strength by the partial substitution of pancreatine, the intended action of which is prevented, *since pancreatine itself,* as the physiology of digestion plainly teaches, *is decomposed by gastric digestion.* My compound not only supplies the necessary amount of pepsine, but also the *Cerium,* which, acting as a sedative tonic, overcomes the hyperæthesia of the gastric nervous supply, and hydro-chloric acid (the normal acid of the gastric juice) is generated within the stomach by the liberation of chlorine from the lime (oxychloride).

Further, the *Saccharated Chloro-Pepsine* has a very powerful and instantaneous influence in stimulating the secretion of saliva, which flows in abundance the moment the compound is placed upon the tongue. The importance of this in relation to the digestion (partial) of the starchy elements in cases of weak digestion of this class of aliment should not be overlooked.

I believe my preparation is *greatly superior* to all other compounds in the market, and to simple saccharated pepsine. Only a short time before the profession, IT HAS GAINED GREAT POPULARITY.

Testimonials received from very eminent members of the Profession attest its superiority.

FORMULA.

	gmm.
Pepsinæ Porci	**140.005,**
Cerii et Calcii Oxychloroxalat	**77.758**
Sacch. Lactis	**ad 373.241**
m **Sig., for Adults**	**10 to 15 grains a dose.**
for Children	**1 to 10 grains a dose, according to age.**

It is intended to restrict the sale of this preparation to physicians' prescriptions and orders, so that I shall rely on the profession to test its efficacy and and give it support.

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Pelvic Cellulitis.

By J. A. Ireland, M. D., Professor of Diseases of Women and Children, Kentucky School of Medicine, Louisville, Ky.

Pelvic cellulitis, like many other diseases, was known and described under various names during the early centuries after the Christian era; but like many other branches of scientific knowledge, this was lost sight of for centuries, and then re-discovered by several investigators at about the same time. England, Ireland, Scotland, France and Germany have contributed to our knowledge; but the irrepressible Americans have done more to elucidate the intricacies connected with the study of this subject than all Europeans put together. The names of our own writers are too well-known to need mention at this time. They have seized thoughts advanced by others, and pursued them to their legitimate results, until every man who pretends to practice medicine, is expected to know more than most of our forefathers, however much he may revere their honorable names.

Inflammation of tissues contained within the pelvis has been studied with such clinical skill, that writers are no longer satisfied with the broad names given to many of the diseases of the pelvis, for instance, "Pelvic Cellulitis," the caption of my paper, covers too much ground for the modern investigator, when we know that connective tissue is found in so many different localities in the pelvis, and that any part of this tissue may be subject to inflammation, without other parts of the same tissues being involved; hence many of the modern names have been invented. With a view to increased accuracy in description, names have been given which are liable to be misunderstood without very careful study of the pathology of pelvic diseases, along with their complications, such as peritonitis, ovaritis, metritis, endometritis, salpingitis—any of which may complicate cellulitis, and in fact, this is nearly always the case; making it a necessity for the practitioner not only to recognize this fact, but to be also familiar with the pathology of all those affections before he is qualified to treat cellulitis. Consequently we have adopted names which would lead the unskilled to believe that wee hav

all of those pelvic diseases so beautifully described as occurring separately and distinctly from all others, when the truth is, we scarcely ever have any one of them without having one or more complications, as for instance, in "peri uterine cellulitis," we are liable to have ovaritis, salpingitis and peritonitis as complications. Accordingly we give our descriptions of cellulitis, bearing in mind this fact that we speak of the case under consideration as cellulitis, because we are convinced, after a thorough examination, that inflammation of areolar tissue preceded inflammation of any other of the adjacent tissues, or we come to the conclusion that after cellulitis commenced, other morbid actions have rapidly gained the ascendancy, consequently we are justified in calling the case peritonitis, ovaritis, salpingitis, metritis, etc., according to the leading of any one of the diseases above mentioned.

With these preliminary remarks, we shall now consider what we understand to be the etiology, pathology, symptomatology, diagnosis, prognosis, and treatment of pelvic cellulitis, using that term in its broadest sense, as well as others intended to designate any particular portion of connective tissue contained within the pelvis, bearing in mind that we find cellular tissue situated within the broad ligaments behind and in front of the uterus, between the vagina and rectum, etc., at any part of which inflammation may begin and spread from that focus to any adjacent similar structure or others, as the blood vessels, peritoneum, etc.

ETIOLOGY.—Many are the causes of this disease as designated by different writers, among which we find parturition, abortion, excessive venery, cold, caustics, pessaries, surgical operations, sponge or sea-tangle tents, introduction of sound, blows or falls, previous ovarian disease, uterine disease and hemorrhoids. Parturition and abortion produce a large proportion of cases, perhaps many of them commencing as phlebitis and septicæmia.

PATHOLOGY.—Pelvic cellulitis, wherever situated, has three stages: 1st. Active congestion. 2d. Effusions of liquor sanguinis. 3d. Suppuration.

At first there is simple congestion, accompanied by pain, increased thermometric range, the patient complaining at the same time of chilly sensations; then follows effusion of liquor sanguinis, which creates swelling, induration and tension, followed by suppuration, unless the morbid chain be broken by one of two

terminations, viz: resolution, or the areolar tissue may be destroyed, and come away as a sloughing mass, as in phlegmonous erysipelas. The course of inflammation here is precisely the same as the course of phlegmonous inflammation in other parts of the body, the stages being the same.

The name peri-uterine cellulitis, has been given to designate inflammation of areolar tissue immediately around the uterus, as the name implies, most frequently attacking but one, but sometimes both broad ligaments at the same time. In view of the complications, such as ovaritis, salpingitis and pelvic peritonitis, I prefer to use the simple name *inflammation of broad ligaments*, which covers the whole pathological ground. In some cases, we have the disease confined to the connective tissue around the neck of the uterus, especially on the posterior portion, forming a kind of collar rather wanting in front. In cases of this kind, the uterus is pushed in front until it impinges upon the bladder; hence the frequent desire to micturate. We have had abscesses occurring behind the uterus connecting with diseased ovaries. In others, between the uterus and rectum, connecting with the broad ligament, on one side extending from uterus to ilium. In other cases, behind uterus and vagina, sometimes several abscesses connected with each other.

In addition to the long train of mischievous results already named, we have others which have been named consequences of cellulitis, so grave in character, that they deserve at least a passing notice. The ovaries are sometimes partially or entirely destroyed, rendering the woman forever barren and an invalid; this is done by suppuration in some cases, by atrophy in others. Again, the Fallopian tubes are left impervious; sterility necessarily results. The uterus is sometimes permanently displaced in consequence of the formation of strong adhesions binding it in a bad position; following this we have sterility, dysmenorrhœa, menorrhagia, amenorrhœa, some of them at least in every case. We also have in some cases tubal dropsy, with a long list of ills too numerous to mention.

Symptomatology.—After parturition, the acute form is usually ushered in with a decided chill, which lasts for a considerable time; this is followed by increased thermometric range, which usually continues throughout the course of the disease, with slight remissions in some cases only.

Vomiting not infrequently occurs in severe cases, while the temperature continues to rise to 103° or 104°, or even higher; the pulse ranging from 110 to 120, and sometimes to 140. Other grave symptoms accompany or speedily follow, such as stranguary, great straining at stool, etc., showing the bladder and rectum implicated. The woman, although not menstruating, will sometimes pass quantities of blood from the uterus.

We have described severe cases as accompanied by the above symptoms. There are however very marked differences in other cases; some appear to be ushered in with severe pain without chill or fever, others again with no well marked symptoms, further than extreme weakness and sense of weight and pulsation about the pelvis, accompanied with marked hectic fever.

CHRONIC FORM.—These cases present very wide differences in their symptoms. We usually have about the following history: One, two or three months after delivery we find the patient has not recovered her wanted strength; is very feeble; appetite not good, very nervous, desponding, and at times only she is feverish; she says she has but little pain; she describes a throbbing sensation in the pelvis; defecation and urination are both very painful. The general appearance of such a patient is one of wretchedness and despair; sometimes the mind is much affected; there is great foreboding as if something dreadful was about to happen.

Physical exploration should never be neglected in such cases. When the finger is introduced into the vagina, the parts are found increased in temperature, swollen, sensitive to the touch, particularly at some spot, usually on one side of the uterus. This condition is followed in most cases by what we call the second stage or that of effusion; inflammation well developed speedily occurs in the areolar tissue of the part affected, usually in one of the broad ligaments, but sometimes around the cervix. When on one side, the tumor may be as large as an orange or even larger. The uterus will be found somewhat fixed and sensitive. Conjoined manipulation should be practiced for further investigation. We sometimes find it expedient to make a rectal exploration before becoming satisfied of the true condition.

During the third stage, our investigations should be pushed still farther, when the uterus will be found much more out of position in an opposite direction from the point of suppuration.

During all these investigations, we should bear in mind that

fibrous tumors, hematocele or pelvic peritonitis may deceive us. Therefore, we must be able to exclude them by a differential diagnosis. After doing this our diagnosis is usually clear and well understood.

Prognosis.—This should be well guarded as to time of recovery, for no living man can tell at what time a patient will be well, even in very favorable cases, for who can tell whether the effused liquor sanguinis will be absorbed in two or three weeks or whether an abscess will be formed, or whether the existing induration will remain for many months without material alteration. As to the probability of death occurring, we may say under favorable circumstances the prognosis is favorable and no more.

Treatment.—There are so many circumstances requiring variations in treatment, we must be satisfied with giving the mere outlines of the treatment in typical cases. When the diagnosis is clear and the case has not advanced far enough to preclude their application ten to twenty leeches should at once be applied over the hypogastrium, provided the patient is not exhausted from previous loss of blood or disease; then this treatment may be omitted. It has been suggested that one or two leeches applied to the cervix will do more good than 10 or 20 externally applied. I have no objection to such application, provided a speculum can be introduced without too much pain. The pain is usually severe. Therefore I have abandoned the practice. The leeching should be followed with ground flax-seed poultices or spongio-piline. Perfect rest in the recumbent posture should be quietly maintained. Purgative medicines by many practitioners are not used for fear of disturbing the parts which should be at rest. I am positively of the opinion that much mischief has been done by a strict adherence to this injunction. For instance, when the bowels have been for days and sometimes weeks constipated, I can see no good reason why old fæcal matter should be locked up in the intestines to poison the system and greatly injure the patient. I *can* see a good reason for the removal of offending matter and at the time deplete the parts inflamed. This can be done by the administration of salines, such as will pump away serum, relieve congestion, cool the system, and aid the cure without in the least injuring the patient. A single purgative only will be required in most cases. It has been said by a prominent professor that a woman can go to heaven with constipated bow-

els. That may be so with many of *his* patients. I prefer keeping *mine* in this world as long as possible. Much has been said in favor of the opium treatment, with and without calomel. When the liver is congested, and blood of course flowing very sluggishly through the pelvic organs, increasing congestion, I say give calomel, follow it with salines, then come in with opium, the great remedy in these cases. Keep the patient partially narcotized and free from pain.

If febrile movement should run high we may administer remedies according to the demands of the case. Sometimes obstinate vomiting is present requiring bismuth, creasote, hydrocyanic acid, ice, soda water in various combinations, pepsine acetate of ammonia, etc. If the case is complicated by septicæmia the proper remedies must be administered. The iodide and bromide of potash, so highly extolled by some, I regard as almost worthless unless administered in chronic cases without suppuration; then they may be of service. Where there is high fever with rapid pulse we may give tinct. digitalis, tinct. veratrum viride, tinct. aconite, cooling drinks, etc. In cases inclined to become chronic I have found great benefit to follow the external use of tinct. iodine and croton oil. To one ounce of the former, add half a dram of the latter and you have the proper strength; apply with a camel's hair brush twice a day until the skin becomes quite sore; repeat as soon as the first vesication is healed. Tonics at the same time should be given and complete rest enjoined; sexual intercourse should be prohibited. But in spite of all the treatment known to the profession at this day, a certain proportion of cases will go into the third stage (suppuration), requiring *surgical treatment*. In order that we may act wisely we must bear in mind the natural tendencies of these cases, remembering still, as we should have done during the whole course of treatment, the differential diagnosis between pelvic hematocele, extra-uterine pregnancy, displaced ovarian cyst, tubal dropsy, etc.; all of these ought to be excluded before we resort to surgical means. We should also remember the natural outlets through which the pus usually finds its way of escape, take into consideration the *dangers* of delay, such as opening into the peritoneal cavity, insuring the patient's destruction from peritonitis; the probabilities in some cases of opening through long and sinuous tracts causing suffering and debility from which she may never recover. The most favorable point for evacuation is through the vagina,

next rectum, next perhaps through abdominal walls, next sigmoid flexure. Any one of the above may be considered more favorable than an opening into the bladder or peritoneum. In retro-vaginal cellulitis we may have an opening through the skin which is not so dangerous. There are some other points at which pus has made its escape; we have given the principal ones.

The necessity of an operation having been determined upon, the time for it is of vast importance. If we operate too soon no pus will be found. The case may be made worse by the wound; yet in some cases where bloody serum has collected its evacuation has shortened the duration of the disease and prevented suppuration, but these cases are rare. Everything being clear and well defined in the mind of the operator, *how* shall he proceed? All things being ready the patient under the influence of an anæsthetic or not, as thought best, he proceeds (if the opening is to be made through the vagina or rectum) to find the location of important blood vessels which may be wounded and give rise to serious hemorrhage; here *tactus eruditus* will be sufficient. If a fluctuating sac is found in the vagina, the patient on the left side, Sim's speculum introduced; if there is the slightest doubt as to the contents of the sac, the needle of a hypodermic syringe may be introduced and a small quantity of the contents of the sac withdrawn for inspection, or better still, if an aspirator is at hand the needle may be introduced, the contents of the sac withdrawn; then by reversed action of the instrument, the cavity may be filled with equal parts of comp. tinct. of iodine and water which must be immediately withdrawn. If re-accumulation should occur, it may be best to open with a bistoury, introduce the finger, search for other abscesses; if found, open them and establish drainage. In case hemorrhage should occur during or after the operation, persulphate of iron or the tampon, or both, may be used. For operating through the rectum the ordinary curved trocar and cannula may be used, or a curved needle of an aspirator. The cavity may be washed by throwing in and withdrawing fluid as in the vagina. For operating through the skin the same instrument may be used. A few sacs will not close in consequence of sinuses leading to other cavities; others in consequence of a peculiar condition of the walls which continue to pour out pus for months or even years; others still receive air, fæces or urine, consequently will not heal.

In some chronic cases old openings should be dilated by tents of

laminaria or enlarged by the knife, after which injections of carbolized water or tinct. iodine should be used two or three times a week. In cases where there is an escape of urine or fæces the appropriate operations should be performed. It is desirable to have the cavities as small as possible, hence the propriety of compresses.

When the patients become much worn down, as they often are, good tonics, good food and occasionally stimulants become necessary. Out-door exercise for those who are able to take it is very essential; good, substantial food should be freely allowed; great care should be taken during the menstrual periods.

DISCUSSION.

DR. PARVIN moved the reference of the paper to the Publication Committee, adding that unfortunately the Society had too brief a time to consider so important a subject, one that had been presented with such ability. While in the main agreeing with the reporter, I beg leave to respectfully present some points of difference. In the first place as to the term *cellulitis*, my belief is that in the great majority of cases of pelvic inflammation the disease is of the peritoneum rather than of the connective tissue. In other words, we have a pelvic peritonitis oftener than a pelvic cellulitis. In the treatment of this inflammation in its acute state, leeches are undoubtedly, so the reporter has stated, among the most valuable of therapeutic agents. But then let those leeches be applied, whenever it is possible—and in the majority of cases I believe it is possible—directly to the neck of the womb rather than to the abdomen. One leech applied to the former is equal to three or four to the latter. I do not believe either in having daily evacuations from the bowels. A good many people will go to heaven who do not have their bowels moved every twenty-four hours. One of the prime points in the treatment of the disease is *rest*. The patient's fixed position and shallow respirations are nature's instinctive demand for rest. Therefore let the inflamed tissue, or tissues possibly, be kept as quiet as possible, and that quiet is disturbed whenever a cathartic is given. Once in five or six days I am sure—and in this I am uttering the

teachings of Bernutz—is quite often enough for intestinal evacuation.

As to local applications, I should place warm turpentine stupes to the abdomen, made every few hours, as among the best. Then use a blister if decided subdual of the inflammation is not accomplished in forty-eight hours. I quite agree with Dr. Ireland as to the value of opium used internally. It is *the* remedy. It is my rule to combine it with opium and extract of conium. It is remarkable what apparently trivial causes will sometimes produce this inflammation. I have had a fatal case of peritonitis from a single scarification of the neck of the womb. So, too, there has been recorded a fatal case originating in simple digital examinations. But more frequently intra-uterine injections and the use of sponge-tents have been causes of the disease. A single word in conclusion. It is of great importance that the menstruation next the attack of inflammation shall be perfect, for if the flow be scanty the disease is very apt to be renewed, and therefore the flow under such circumstances should be assisted especially by the application of two or three leeches to the neck of the womb.

Dr. Ireland was sorry that Professor Parvin had misunderstood his paper. He thought he had made himself clear. He took the name of the broad ligament instead of the peritoneal tissue very logically, and the fact was that there was really no difference between his paper and Dr. Parvin, for he had said the same thing in different language. The term pelvic peritonitis or cellulitis was used according as the disease was understood to be begun in one or the other or one to have gone far beyond the other. He was satisfied that there was scarcely ever a case of pure cellulitis, nor was there ever a case of simple pelvic peritonitis. He thought he had made himself clear but if he was misunderstood he could not help it. With regard to purgatives, he was just as much opposed to giving them every day as Dr. Parvin and he was just as much of the belief that patients had gone to heaven without being purged every twenty-four hours as Dr. Parvin, but he was opposed also to locking up the bowels with opium while they retained fæcal matter days and weeks old. He would give a saline cathartic, and where there was occasion he would give calomel first and then saline followed by opium. He saw no other difference except that he would give opium only

after the bowels were first cleared out. With regard to leeches, Dr. Parvin was right, provided he could use a speculum under such circumstances, but he himself had had the misfortune to have patients who would not allow the introduction of a speculum and where there was peritonitis Dr. Parvin or Dr. anybody else would have a pretty severe job to introduce a speculum without putting the patient under the influence of chloroform. It was true, that one or two leeches would be of more benefit applied to the womb than anywhere else, still it was impracticable in many cases to apply them. With regard to inflammation being set up by a mere digital examination he was sorry that he had not read his paper in full, and he did not intend that the printer should have it until he had made a little alteration in what he had read. He would be pleased to have further criticism. He expected to be misunderstood. He had been misunderstood for years in his teaching to the class. With respect to giving saline cathartics, he advised such cathartics when the bowels were constipated and then to follow with opium. This wholesale condemnation of purgatives is fraught with much danger to our patient. Opium perhaps did more good than any one medicine that could be given. He would like to ask Dr. Parvin if he would give opium if the bowels had not been moved for eight or ten days.

DR. JONES, of Indiana:—I would like to ask both of the gentlemen who have spoken on the pending subject what they would do when they met with a peculiar idiosyncrasy which entirely prohibited the use of opium.

DR. IRELAND replied that there were a number of substitutes, bromide of potash, hydrate of chloral, either with the bromide or without it; belladonna also might be given. Sometimes those who could not take opium in crude form could take morphine with a little peppermint water. By repeated trials something would at last be found that would answer the purpose but there were very few women who would not tolerate opium. He had found some few, but very few indeed.

DR. JONES, of Indiana, said that so far as temporary relief was concerned, the articles named would answer the purpose but he did not think either of them would answer as well as opium in overcoming the inflammatory condition of the patient. They might to a certain extent relieve present symptoms—present distress—but he did not believe they would compare with opium in removing the inflammatory condition.

Local Treatment of the Pharynx, the Pharyngo-Nasal and Nasal Cavities in Scarlet Fever, Measles and Diphtheria.

By Thos. F. Rumbold, M. D., of St. Louis, Mo.

I do not propose to treat of the nature, cause or symptoms of scarlet fever, measles or diphtheria, but to give my views as to the proper method and means of making local applications to the throat of those patients who suffer from either of these diseases.

I consider it very fortunate for patients who are suffering from the exanthematous disease, that inspection of the throat and naso-pharynx, is becoming more frequent than it was a few years ago.

When it is known that in patients suffering from scarlet fever, measles or diphtheria, the throat complications are often, very often, the only symptoms that occasion serious apprehension, why is it then, that a majority of physicians are satisfied with such an examination as can be made with a tablespoon handle, or why do they prescribe a gargle, or use a swab? It is well known that the great danger is, that the inflammation will extend through the nostrils up the lachrymal canals and affect the eyes, or, worse still, extend through the Eustachian tubes, and eventuate in so serious an inflammation of the middle ear, that it may be extended to the brain and produce convulsions.

The urgency of the symptoms of acute complaints of the throat, is, many times, not so much on account of any impediment to the respiration, or to the toxæmia of the disease, as it is to the dangers of the extension of the inflammation to distant organs, and the involvement of important nerves.

I am not afraid to assert that there is not an individual in this assembly, that would be satisfied to make an application to the throat alone of one of these patients, after he has once made a post mortem examination of the pharyngo-nasal and nasal cavities. The signs of inflammation are very much more marked in these cavities than they are in the throat.

Examination of these cases, made post mortem, are by far too uncommon. Examinations made because of the presence of an ovarian cyst or a diseased hip-joint are as common as the existence

of the cases themselves, but even a superficial examination made by a section of the head (this can always be made without the least disfigurement of the corpse), which is many times more important, because of the cases occurring a thousand times more frequent, is almost never made. I may astonish many by saying that in every instance in which I have made a section of the head, I have found that the mucous membrane was mortified, and that, from its appearance, this condition must have taken place some time before death.

If this is the case, why not treat these cavities with more thoroughness than we treat the throat? Why is that the brush and probang are relied on, when we know that by these instruments we cannot reach the most inflamed portions of these cavities? Even if the throat was the only cavity to be treated, the brush and probang would as signally fail to touch its entire surface, as they would fail to wash clean the entire surface of the clenched hand. In both instances it is the projecting folds only that receive the application.

It now devolves upon me to describe the means and the method of making local application to these highly inflamed surfaces.

As we cannot decrease the severity of an inflammation, if we increase the existing irritation, one of the qualifications of our means for making applications, must be that it will cause no irritation. Another qualification is that every portion of the diseased surface within the nasal and naso-pharyngeal cavities, the pharynx and larynx shall be properly cleansed, and the remedy properly applied to them.

The only instruments that possess these qualifications are spray producers. They far surpass all other instruments for making local applications to diseased surfaces. The stream thrown by them is composed of air and fluid. As the inflamed or ulcerated surfaces are not touched by the instrument, but only impinged upon by the air and liquid, it follows that they are operated upon in the mildest manner possible; therefore, if the medicated fluid that is made into a spray is not of itself a cause of irritation, the only cause for the contraction of the muscles of the fauces will be the impingement of the air and spray upon the surface, which sensation the patients soon learn to tolerate. This being the case there is an abundance of opportunity for making the application thorough enough to act upon

the entire mucous surface, i. e., to blow and wash the mucopurulent secretion away from every irregularity and from locations that have never been reached by the brush, sponge or syringe, or ever viewed during life. Thus, these instruments combine with the power of cleansing and medication, a thoroughness and a mildness that is unequalled by any known means.

To accomplish these important results, these spray producers must be made to throw streams in the direction that is required to make a direct application to each portion of the diseased surface; they must also be of such capacity and power that the quantity and force may be regulated to suit the severity of the case. As each instrument can throw a stream in but one direction only, and as the avenues to the extensive surface of the posterior nasal and pharyngo-nasal cavities is the narrow space behind the sensitive soft palate, and to the larynx, over a reclining and sensitive epiglottis, therefore a number of nebulizers are indispensable. Their points should be so constructed, that each will throw a stream in a different direction, yet their combined action should be such that they will treat the entire surface of the various cavities (Figs. 1 and 2).

My experience has taught me that five varieties are necessary to cleanse and to treat the fauces and superior cavities. (Fig. 1.

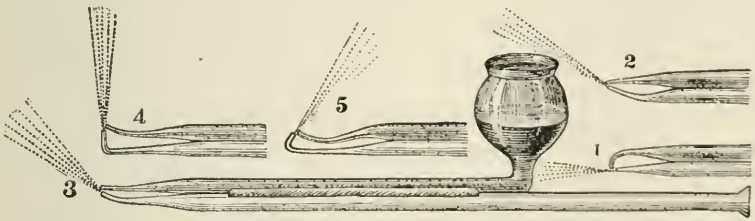
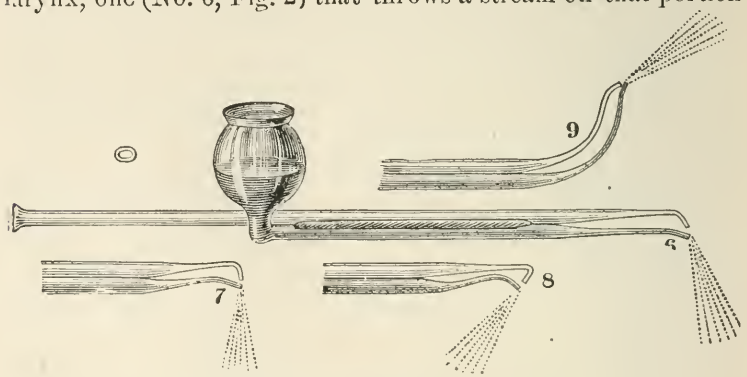


Fig. 1.—Spray producers for the pharynx, the pharyngo-nasal and nasal cavities.

Nos. 1 to 5 inclusive)—viz.: One variety (No. 1.), throwing a horizontal stream acting upon the surface of that portion of the pharynx which is in view when the mouth is open and the tongue is depressed, washing the anterior portion of the soft palate, the nostrils, and (by elevation and depression of the outer extremity of the instrument) the posterior of the pharynx from the third cervical vertebra upon the middle of the second; one (No. 3) throwing a stream at an elevation of forty-

five degrees with the horizon, it directs the spray against that portion of the posterior wall of the pharyngo-nasal cavity covering the first and second vertebræ; one (No. 4) throwing its stream vertically, reaching the superior surface or arched boundary of the pharyngo-nasal cavity; one (No. 5) reaching through the posterior nasal openings, throwing a stream upward and forward and at an angle of forty-five degrees, washing the under surfaces, borders and sides of the turbinated process and the sides of the septum nasi; and still another one (No. 2,) its stream intermediated in direction between the first and second named. This is introduced into the anterior nares, and, by elevation and depression of its outer extremity, made to wash and medicate the remaining portions of the nasal passages. For the larynx, one (No. 6, Fig. 2) that throws a stream on that portion



Fig, 2.—Spray producers for the larynx.

of the posterior wall of the pharynx, which is in front of the third and fourth vertical vertebræ; one (No. 7) that directs its stream into the larynx, and, accompanying slight inhalation, of the trachea; one (No. 8) that washes the bases of the tongue and posterior surface of the epiglottis.

The direction that the spray issues from each instrument will indicate which one of them ought to be used for each location. It is very fortunate that the soft palate is not nearly so sensitive in the case of acute affections of the throat and upper passages, as it is in the chronic, as the pharyngo-nasal and nasal cavities require very much more the careful application of local remedies, than does the fauces or the larynx. I am well aware that this is not generally conceded by the profession, as most of

them are satisfied by prescribing a gargle. The parts reached by this means does about as much to relieve the urgent symptoms occasioned by the inflammation, as the washing of otorrhœal secretions away from the external ear does to the inflammation of the tympanic cavity. Many will think that in this I am exaggerating the importance of the treatment of the pharyngo-nasal and nasal cavities in the acute affection, but I am very certain that I am not doing so.

The patient, if not under four years of age, should be directed how to use the tongue depressor on himself. This instrument is required for both examination and treatment, as it provides a free access of light and prevents interruption by the tongue during the use of the reflector and the spray producers. Even a slight pressure on the tongue, if made by the physician, will produce a reaching, a contraction of the fauces, and an elevation of the soft palate, which will render the examination and the application of the spray impracticable, but if the patient has the instrument entirely under his own control, the dread of being choked will be avoided. The mind being at rest and all apprehension of any disagreeable sensation produced by the tongue depressor being removed, the muscles of the fauces and velum will remain quiet and passive. This is just *the* condition that the patient's mind must be placed in, if a successful application is to be made.

The patient is directed to place the depressor well on the tongue—but not as far back as to cause a gapping sensation,—to open the mouth as widely as possible, and to breathe freely and naturally. This manner of using the depressor is not only more convenient for the physician, but more pleasant for the patient.

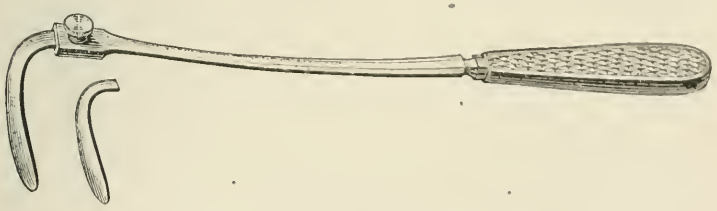


Fig. 3.—Long-handled tongue depressor.

For many years I have used a tongue depressor (Fig. 3) whose handle and shaft is about twelve inches long. This length of shaft allows the patient's hand to be placed so far

down his breast that it will not be in the way of the operator. Into the head of the shaft is fastened either a long or short tongue-piece, i. e., one that is adapted to the length of the patient's jaw. With this instrument the soft palate, the uvula, the tonsils, the lateral and posterior walls of the pharynx may be exposed to view.

I have been particular in describing this simple instrument and the method of using it, because in my judgment, a successful treatment cannot be made if the patient does not in this way and to this extent hold his own tongue down.

The next question is, how can we induce even a six or seven year old child to allow the application of the spray. This is of course left to the tact of the physician. Every child and even every adult is afraid of instruments; but far worse than this, children have had their confidence so frequently abused, and have so frequently been deceived—in plain language, been lied to so often—that they will not believe one word said to them concerning the effect of either the spray producers or of the remedies to be applied. My experience has led me to believe that every child is a close and accurate observer of the words and actions of a physician. I always take advantage of this, and make it my means to successfully overcome the fears of the little patient.

As a general thing my patients have been in the hands of a physician who has made just that kind of attempts at treatment of the throat that has greatly frightened the child. I will relate the worst case of this kind that I ever met; it occurred some years ago. I am pleased to say that such cases are not of of frequent occurrence.

The boy, æt. 6 years, had two times been wrapped so tightly in a sheet that he could not kick or fight with his hands; he was then placed on a nurse's knees, the father held the feet, the mother held his mouth open with a spoon handle, while the physician manipulated the graceful swab (made of stiff pine wood and a few wraps of domestic), repeatedly assuring the struggling child that he would not hurt him, etc.

On entering the bed-room I found the patient, who was suffering from scarlet fever, sleeping with his mouth open and breathing with some difficulty. The conversation with his mother concerning his case awoke him. Just as soon as he saw me he turned over, crawled on his hands and knees to the other

side of the wide bed, at the the same time crying and saying "No I won't, I won't." His mother and aunt both commenced to assure him that I would not hurt him in the least, etc. I at once desired them to discontinue their efforts to induce him to submit to the application of the spray, but at the same time commenced to lay the instruments out on a small table at the bedside. While I was telling the mother that I was sure that he had been deceived by others, yet he would believe me when I told him that I would not hurt him in the least, or give him any disagreeable medicine, he loudly contradicted me and said that I never should do anything for him. I did not heed him in the least, but addressed the mother, informing her how I wished her to use the spray producer while I was absent. She remarked that she feared that she could not persuade to him submit to their application. I insisted that he would not only submit, but would ask for it, as every one of my patients liked it. By this time I had placed a small quantity of vaseline comp. in the cup of a spray producer that throws a horizontal stream (No. 1, Fig. 3), and after it was warmed over a gaslight I sprayed a few whiffs into my own mouth, stating that the reason why children liked it was because it was sweet. I then addressed the child and told him that I did not mean to hurt him in the least, and if I did so he could take his head away at once, as no one should hold him, and I would not make another application. His mother then wished to hold his head, but I insisted that no one should go near him. This had a quieting effect on him; I gave him the tongue depressor, but he at first threw it down and reminded me of my promise not to hurt him. I assured him that I would not hurt him, and as he had the instrument in his own hands I was sure that he would not hurt himself. He then placed the tongue-piece on the tip of the tongue, and just as soon as I pointed the spray instrument towards his face he threw down the depressor and said that I was going to hurt him. I then in a kindly way assured him that he knew that I had not done anything to him; therefore he ought not to cry out in that way, after he had promised that he would not do so. After a little firm but kind persuasion—his father and mother all this time looking on, but taking no part—he again placed the depressor on his tongue, and instantly I had the spray sent into his mouth. This of course only touched his tongue and soft palate, which, as far as the local application was concerned, did not do the least good, but so far

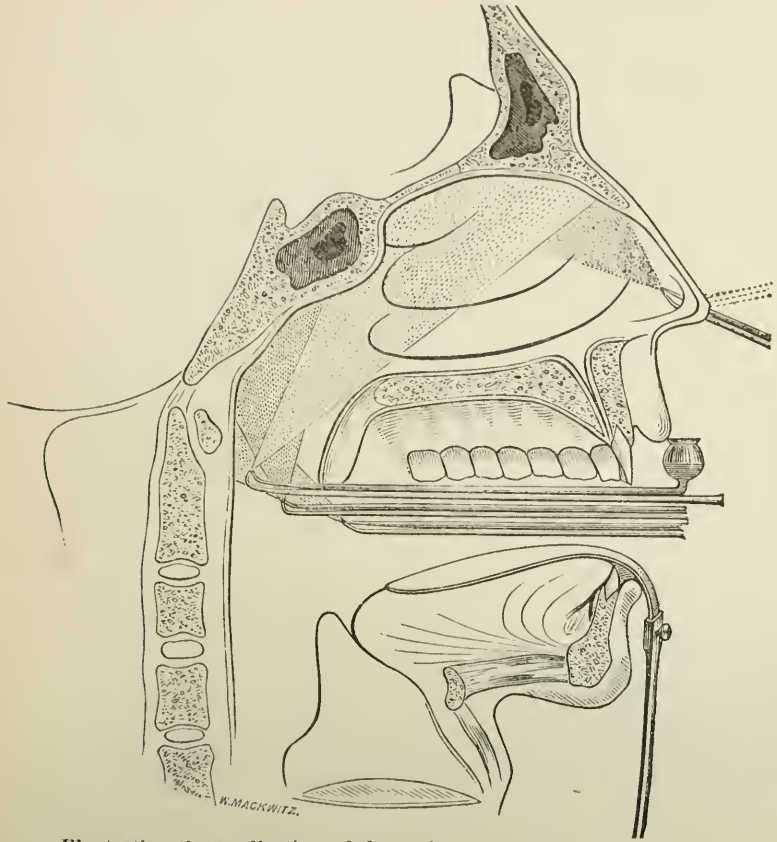
as the boy's fears were concerned, gave him substantial proof, in spite of his preconceived dread, that he was not going to be hurt. The instant that the spray touched him, it brought about another episode, during which he again accused me of hurting him, after I had promised that I would not do so. I firmly yet kindly denied causing him the least pain, and stated that he knew that I had not done so, therefore his complaint was a mistake, and was made against his promise, which was, that he might jerk his head away if I should cause him the least pain. On requesting him to place the depressor on his tongue again, he desired to know the number of applications to be made; on being told that I desired to throw the spray three times more into his throat, he complied. The instant that the depressor was on his tongue, I had the spray (which had been kept warm and ready for him,) in his mouth. This time the stream struck fairly into the fauces, and caused him to gag. To this he complained, and wanted to go to his mother, but I made it my business to control the mother as well as the child. On a little more persuasion I made two more applications, the last one was sent up behind the soft palate, but without the instrument touching it.

At my next visit, made six hours afterward, I had but little trouble. I occupied about seven minutes in making five applications, three of which were good ones, sent up behind the soft palate, and two failures. I was careful always after this not to cause him to retch. The time occupied at the first visit was fully 45 minutes.

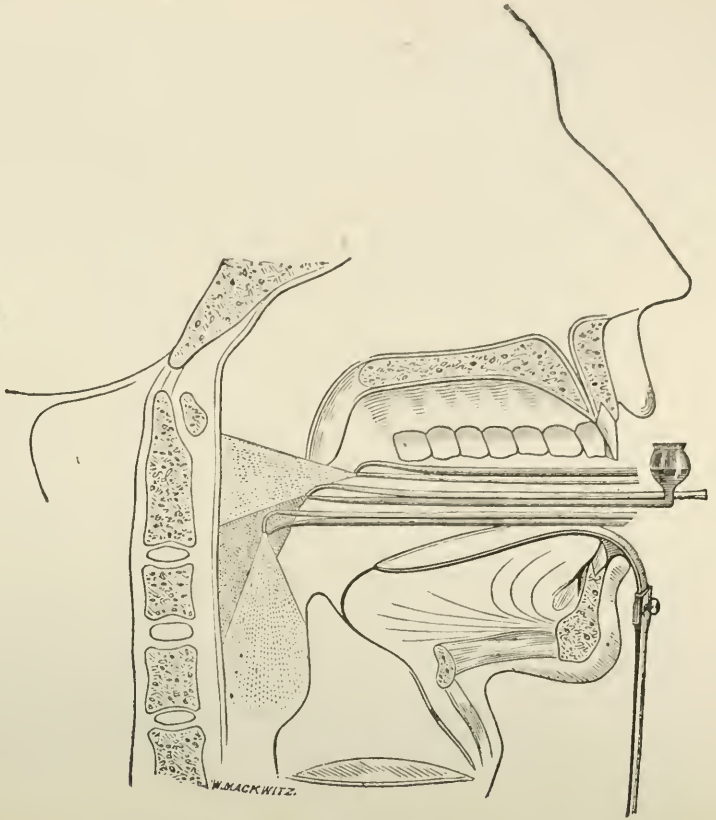
At the third visit I had no trouble in making the applications. He called to his mother, while she was engaged in detailing to me his symptoms during my absence, and desired her to get the instruments from off the mantle, in order that I might make the applications. At this, and each succeeding visit, I used the spray producers (indicated in Figs. 2 and 4, Nos. 1, 4) and 2, using each in the relation named, and applied about a-half a dram of the mixture, always made warm, by each instrument. The mixture used is made as follows:

℞. Vaseline.....℥ ij
Glycerine.....℥ ij
Carbolic acid.....m j Mix.

This preparation is not unpleasant to the taste, and has a very soothing and agreeable effect. It should be applied once in



Illustrating the application of the various spray producers to the pharynx, pharyngo-nasal and nasal cavities.



Illustrating the application of the spray producers to the pharynx, larynx and the air passages of the lungs.

from two to six hours. I have not yet treated a case that was not very greatly benefitted by this mixture.

The effect on the case above cited, was to greatly reduce the high temperature and quick pulse, and decrease all the most aggravating symptoms inside of eight hours. Although the child had glandular enlargements on both sides of the neck, and had ear complications, and was so ill that the family physician feared that he might not recover, yet in four days he was sitting up in a chair.

I have had two cases in whom the nasal passages were nearly occluded, and the throat was so seriously affected that they could not speak aloud, nor swallow a liquid without a part of it passing up through the nostrils, that were at once relieved of all of these symptoms by the application, by the spray producers, of the vaseline comp. already given.

Vaseline is the very best remedy that can be applied to the throat in these complaints. It relieves the sensation of rawness and dryness, and prevents the secretions from adhering to the mucous membrane. I have frequently prescribed it in the cold state, to be given from a teaspoon as frequently as the patient complained of dryness in the fauces. I always direct that vaseline be applied to the neck, breast, nose, and around the ears of every patient, and upon the whole body in case the patient has scarlet fever or measles. It has a cooling effect, and lessens the liability to take cold.

Carbolic acid stands next in efficacy, but if it is not used in a very dilute form, it will do much harm through its anæsthetic property.

Before closing this subject I wish to enter my protest against the employment of the chloral of potassa. I have not the least hesitancey in saying there are a great many cases of sore thrort that would have run a mild course, had it not been for a gargle of chlorate of postash. I never knew of a mild case that was relieved by it, or of a severe case that was not made far worse from its effects. Common table salt is but of little use in these cases, but it is very much better than chlorate of potassa in *any* case. Habit has had much to do with the prescription of this remedy by the profession. I am very certain that no physician who has had an ulcerated or diphtheritic throat will use it on himself the second time. The pain it occasions is always great and its effects are equally injurious. I am sure that this much vaunted remedy must soon be used in the chemical laboratory only.

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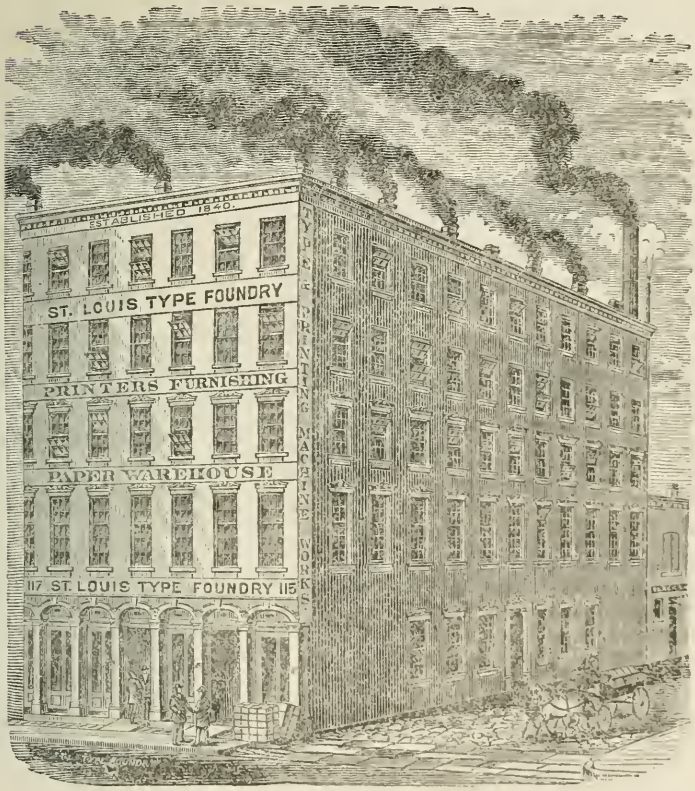

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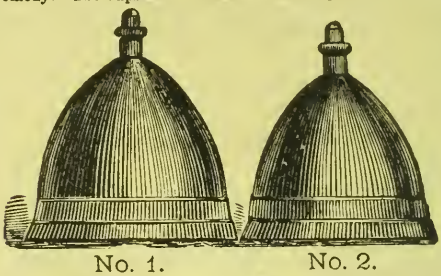

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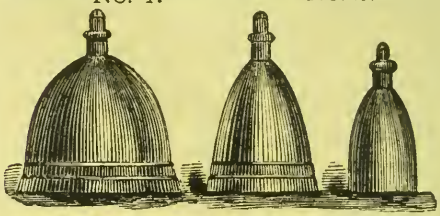

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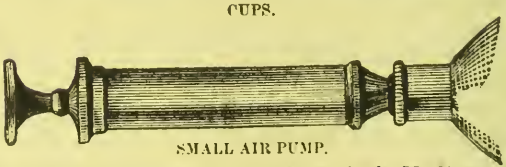

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